
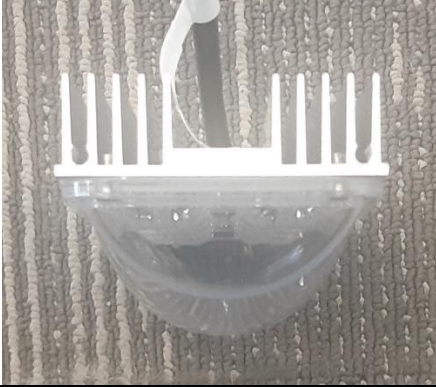


## LM-79 Goniophotometric Report TEST REPORT NO. P296C

Fixture Information	
Zilux Outdoor LED Module Cat. No. TPIII-CLEAR. Eight White LEDs run at 24.0VDC.	
	
Side View	
	
Front View	

Prepared For:  
Zilux Inc.  
Quebec, Quebec

Tested Date: March 27, 2024  
Prepared Date: March 27, 2024

Prepared By:



Krishnan (Hari) Harikumar, PhD, LC  
Senior Research Scientist  
**Lumentra Inc.**

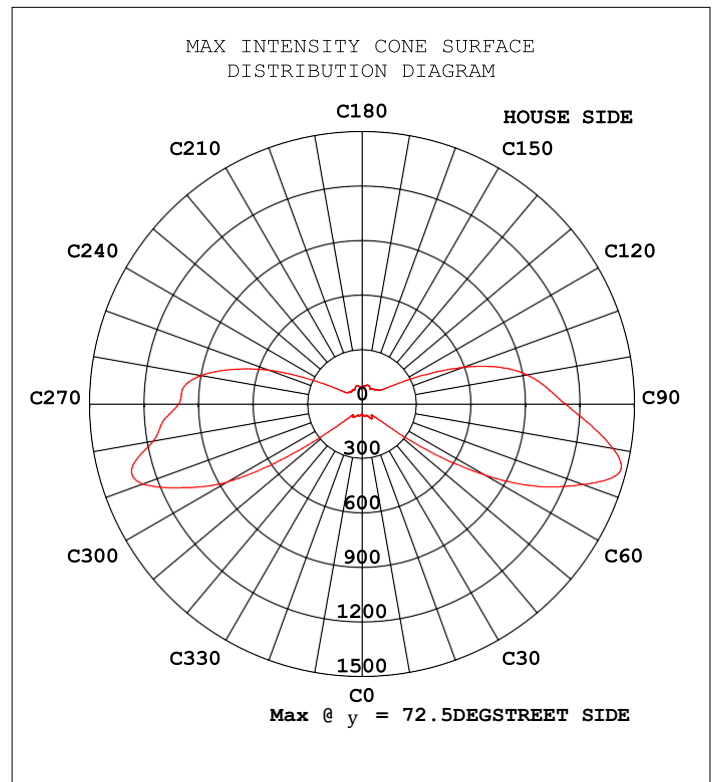
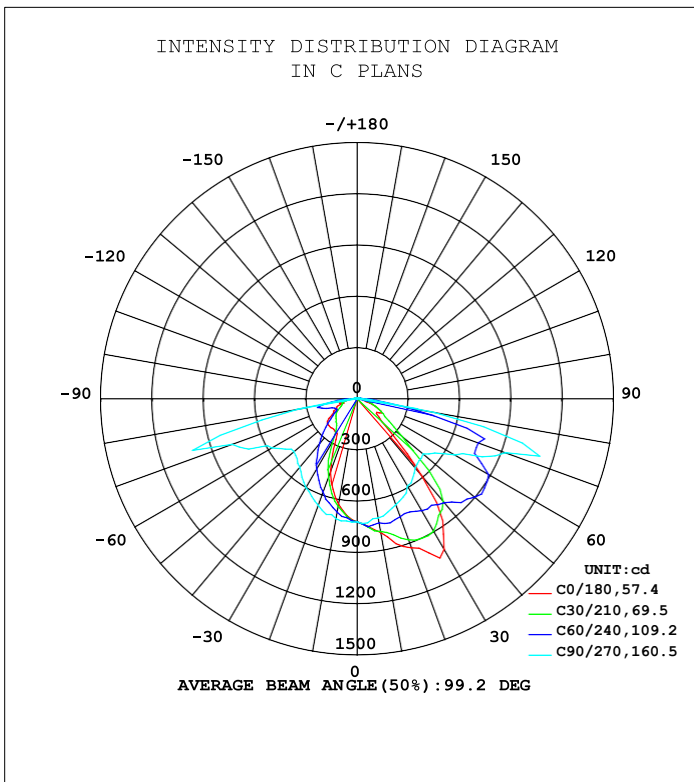
Approved by:

Charles Sisson

**STREETLIGHT PHOTOMETRIC TEST REPORT**

Test:U:24.000V I:0.9374A P:22.500W PF:1.0000 Freq:0Hz		
Lamp Flux:2423.08x1 lm		
NAME: TPIII-CLEAR	TYPE: Outdoor LED Module	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Zilux	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			Eff: 107.65 lm/W
MODEL		I <sub>max</sub> (cd)	1465	η street_up (%)	1.0
NOMINAL POWER (W)		LOR (%)	100.0	η street_down (%)	65.3
RATED VOLTAGE (V)	120.0	TOTAL FLUX (lm)	2422	η house_up (%)	1.0
NOMINAL FLUX (lm)	2423.08	MAXIMUM @ (C,y )	75,72.5	η house_down (%)	32.6
LAMPS INSIDE	1	η up (%)	2.0	76 FLASHAREA (m2)	
TEST VOLTAGE (V)	120.0	η down (%)	97.9	SLI	



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

**ZONAL FLUX DIAGRAM**

Test:U:24.000V I:0.9374A P:22.500W PF:1.0000 Freq:0Hz Lamp Flux:2423.08x1 lm		
NAME: TPIII-CLEAR	TYPE: Outdoor LED Module	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Zilux	SUR.:	Shielding Angle:

y	C0	C45	C90	C135	C180	C225	C270	C315	y	Φ zone	Φ total	%lum
10	794.6	760.5	709.9	649.8	627.0	662.1	713.2	769.1	0- 10	68.55	68.55	2.83
20	929.3	816.7	660.6	538.4	456.1	541.2	664.8	802.9	10- 20	196.8	265.3	11
30	1020	838.7	589.8	384.6	235.7	381.2	601.5	831.5	20- 30	296.1	561.4	23.2
40	591.2	866.7	529.8	212.6	227.4	215.8	523.5	852.7	30- 40	349.4	910.8	37.6
50	170.0	813.1	503.4	147.4	229.4	145.3	483.2	811.4	40- 50	345.4	1256	51.9
60	166.3	443.7	659.8	115.7	159.0	112.9	576.5	497.4	50- 60	329.7	1586	65.5
70	81.98	151.9	924.8	117.1	118.9	104.7	779.2	167.5	60- 70	346.6	1933	79.8
80	38.50	59.22	453.7	81.31	67.40	68.95	349.7	54.58	70- 80	355.0	2288	94.4
90	14.01	29.59	35.21	40.36	14.53	30.07	29.20	19.85	80- 90	85.03	2373	98
100	11.23	18.54	20.51	13.80	2.738	13.93	17.96	17.94	90-100	21.66	2394	98.8
110	6.567	6.622	11.99	6.447	1.963	6.738	11.20	6.287	100-110	13.01	2407	99.4
120	5.077	4.004	7.162	4.670	2.032	4.952	6.568	3.733	110-120	6.277	2414	99.6
130	3.212	2.762	5.101	3.867	2.098	4.009	4.469	2.422	120-130	3.513	2417	99.8
140	3.623	1.886	3.900	3.463	2.776	3.638	3.601	2.152	130-140	2.380	2419	99.9
150	1.467	1.886	2.968	3.160	2.944	3.335	3.034	2.085	140-150	1.716	2421	100
160	0	0	0	0	0	0	0	0	150-160	1.032	2422	100
170	0	0	0	0	0	0	0	0	160-170	0	2422	100
180	0	0	0	0	0	0	0	0	170-180	0	2422	100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

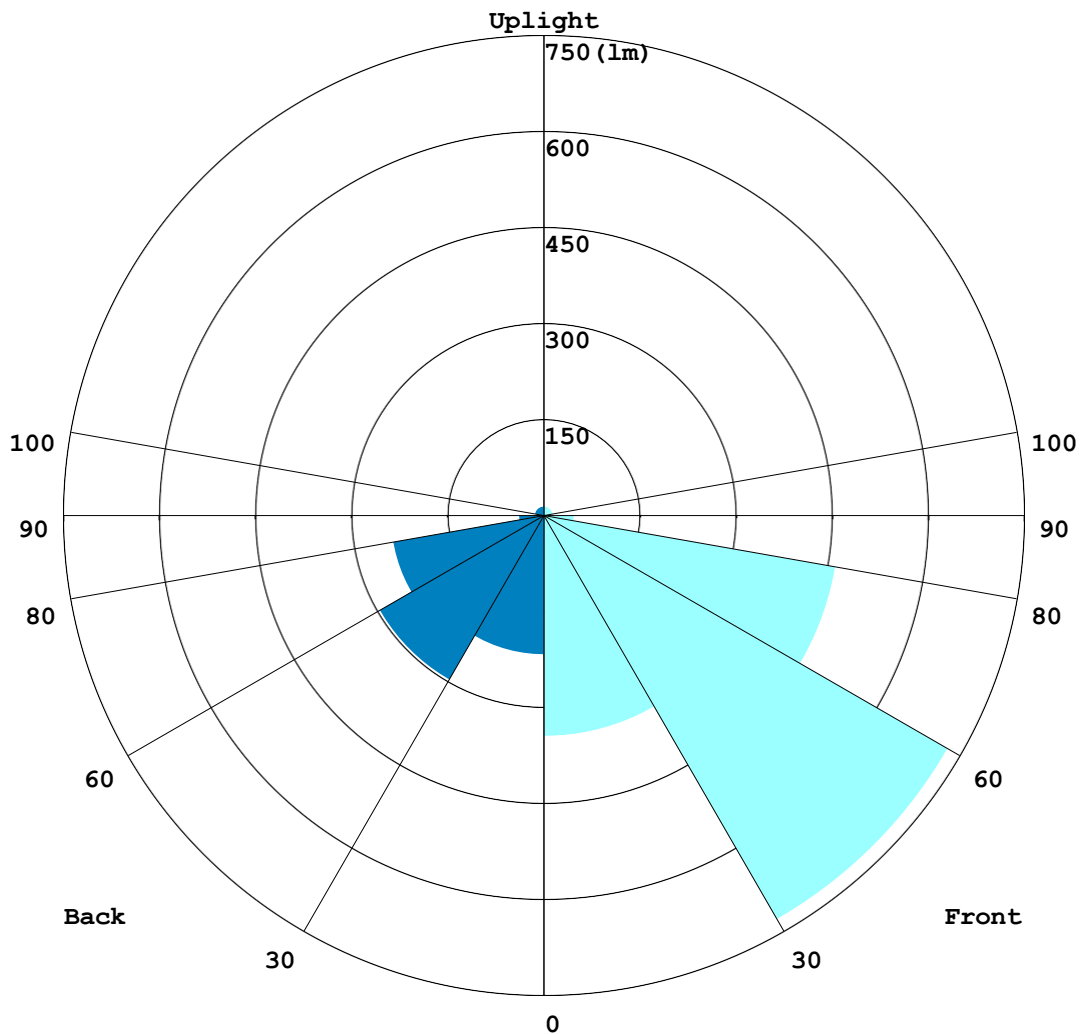
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators:Charles  
 Test Date:27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance:26.000m [K=0.8358]  
 Remarks:

LCS REPORT

Test:U:24.000V I:0.9374A P:22.500W PF:1.0000 Freq:0Hz		
Lamp Flux:2423.08x1 lm		
NAME: TPIII-CLEAR	TYPE: Outdoor LED Module	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Zilux	SUR.:	Shielding Angle:

LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

**BUG REPORT**

Test:U:24.000V I:0.9374A P:22.500W PF:1.0000 Freq:0Hz Lamp Flux:2423.08x1 lm		
NAME: TPIII-CLEAR	TYPE: Outdoor LED Module	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Zilux	SUR.:	Shielding Angle:

**IESNA Luminaire Flux Distribution Table:**

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	344.4	14.2
FM - Front-Medium(30-60)	728.65	30.1
FH - Front-High(60-80)	462.42	19.1
FVH - Front-Very High(80-90)	46.76	1.9
<b>Total Forward Light</b>	<b>1607.2</b>	<b>66.4</b>

BL - Back-Low(0-30)	217	9.0
BM - Back-Medium(30-60)	295.9	12.2
BH - Back-High(60-80)	239.16	9.9
BVH - Back-Very High(80-90)	38.268	1.6
<b>Total Back Light</b>	<b>814.95</b>	<b>33.6</b>

UL - Uplight-Low(90-100)	21.664	0.9
UH - Uplight-High(100-180)	27.924	1.2
<b>Total Up Light</b>	<b>49.588</b>	<b>2.0</b>

BUG (Back, Up, Glare) Rating	B1-U2-G1
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	790.33	24.627	814.95
Street Side	1582.2	24.961	1607.2

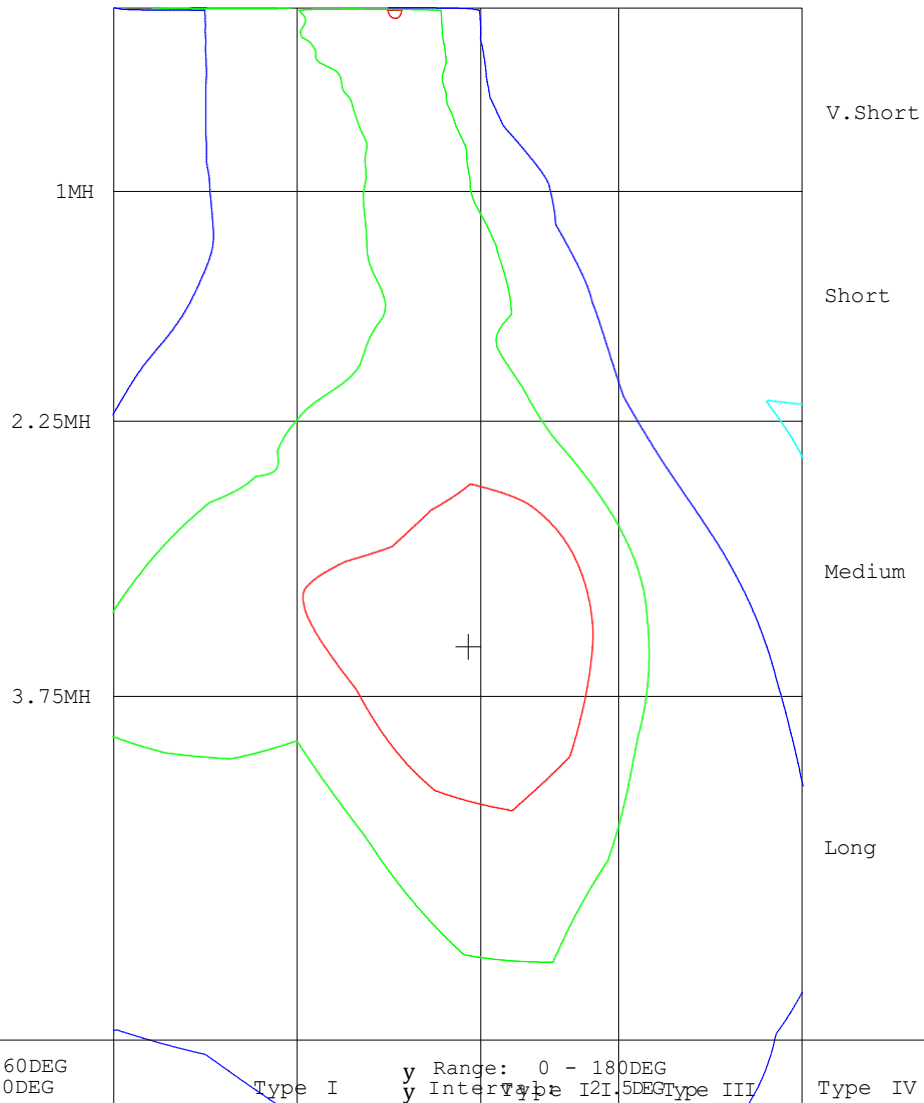
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

ROAD ISOCANDELA REPORT

Test:U:24.000V I:0.9374A P:22.500W PF:1.0000 Freq:0Hz Lamp Flux:2423.08x1 lm		
NAME: TPIII-CLEAR	TYPE: Outdoor LED Module	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Zilux	SUR.:	Shielding Angle:

ROAD SURFACE ISOCANDELA DIAGRAM



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH 6MH  
 Temperature: 25.8°C 1MH  
 Operators: Charles  
 Test Date: 27 March 2024

Type I  
 Type II  
 Type III  
 Type IV

y Range: 0 - 180DEG  
 y Interval: 15DEG  
 Test System: EVERFINE GO-R5000 V2 SYSTEM V2.00.463  
 Humidity: 26.12% 7.5MH  
 Test Distance: 26.000m [K=0.5] 3.75MH  
 20% 292.2  
 7.0% 1.022.7  
 Roadmarks:  
 50% 730.5  
 5% 73.05

**Photometric Data Table [cd]**

G/C	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0
0.0	721.5	721.8	721.9	721.4	722.2	721.5	721.6	722.1	722.1	722.3
2.5	733.7	733.8	733.0	733.2	734.7	734.6	735.4	735.4	735.3	735.4
5.0	750.5	751.3	752.1	754.5	755.9	754.4	755.1	755.4	757.2	757.4
7.5	771.8	772.6	775.6	777.3	779.7	780.9	780.9	776.5	770.8	762.8
10.0	794.6	797.2	800.9	800.3	801.9	799.1	789.9	779.9	771.3	760.5
12.5	829.6	833.1	833.9	832.6	831.1	816.5	802.0	785.9	773.6	764.5
15.0	877.8	881.5	881.3	882.6	871.3	848.0	824.6	805.4	788.6	776.4
17.5	907.4	914.5	922.5	920.8	901.6	877.4	857.1	832.4	813.2	794.5
20.0	929.3	940.5	950.9	938.6	915.1	897.9	878.2	861.8	844.5	816.7
22.5	946.7	955.3	957.4	939.0	919.6	904.8	895.0	885.7	867.3	837.0
25.0	996.8	999.7	978.7	948.7	925.4	908.1	900.3	888.5	874.0	845.4
27.5	1052	1049	1012	966.9	931.8	919.7	903.2	877.4	856.0	843.2
30.0	1020	1019	1007	962.9	915.7	905.5	894.8	869.6	855.2	838.7
32.5	940.0	942.6	953.3	925.9	897.1	888.7	865.9	852.4	849.2	837.7
35.0	874.4	878.8	895.9	900.0	878.1	865.1	833.5	827.7	830.1	845.3
37.5	766.6	774.5	795.5	831.7	862.4	840.2	817.5	813.0	828.3	863.7
40.0	591.2	596.6	610.9	671.6	741.2	773.0	784.0	822.8	868.9	866.7
42.5	437.5	438.2	459.6	505.6	586.3	626.9	718.2	810.6	866.1	883.9
45.0	278.5	279.5	293.4	337.1	423.8	478.5	594.4	755.0	853.8	878.8
47.5	197.3	202.2	214.4	237.5	288.6	340.6	429.0	632.2	822.8	844.5
50.0	170.0	169.4	160.8	173.8	200.7	259.9	340.6	506.9	687.8	813.1
52.5	143.2	151.3	150.4	143.6	154.8	190.4	276.0	416.0	568.6	718.0
55.0	139.9	143.1	144.7	139.0	136.7	152.7	229.2	353.1	460.6	599.2
57.5	153.8	151.9	144.3	145.7	130.2	138.2	192.4	302.6	368.1	519.8
60.0	166.3	162.8	149.1	136.9	131.3	123.6	179.5	252.2	307.5	443.7
62.5	159.7	156.4	152.3	132.9	126.9	116.2	156.0	216.4	239.5	375.3
65.0	138.0	142.3	139.4	125.0	116.8	112.2	135.4	182.1	191.1	310.7
67.5	114.6	112.5	116.7	115.4	104.5	105.1	118.6	143.4	145.2	228.3
70.0	81.98	88.04	90.11	91.02	87.83	92.72	101.2	117.7	102.5	151.9
72.5	56.59	60.56	68.32	68.68	67.89	71.55	88.59	97.05	79.58	104.9
75.0	41.73	47.78	53.70	55.70	56.12	60.27	68.28	81.17	67.93	78.77
77.5	37.50	41.30	45.09	43.49	45.12	48.60	55.76	67.09	57.80	65.44
80.0	38.50	43.61	42.89	37.31	35.37	39.85	44.08	50.87	51.05	59.22
82.5	38.11	39.15	36.65	29.57	29.09	31.38	34.51	39.42	42.83	51.16
85.0	24.86	26.32	26.57	23.32	23.12	25.75	29.64	34.83	40.65	50.29
87.5	20.49	22.57	22.03	20.32	21.63	24.81	28.28	34.28	39.38	46.51
90.0	14.01	15.62	16.08	13.60	14.69	17.37	20.83	23.62	25.96	29.59
92.5	12.16	13.62	12.51	10.65	12.02	14.14	16.40	19.34	21.89	24.41
95.0	11.00	11.99	9.293	8.521	9.966	12.30	16.64	16.35	21.02	22.74
97.5	10.76	9.783	6.365	6.179	10.34	17.10	14.03	12.99	15.21	19.56
100.0	11.23	6.416	4.285	4.974	7.984	14.04	13.93	12.21	12.73	18.54
102.5	13.87	4.870	3.777	4.439	7.146	12.88	10.03	9.598	10.11	15.70
105.0	10.87	4.629	3.170	4.235	6.212	9.133	7.431	7.493	8.293	12.07
107.5	7.117	4.056	2.732	3.760	5.511	6.079	5.669	6.224	6.750	9.439
110.0	6.567	3.617	2.361	2.855	4.870	5.011	4.703	5.284	5.610	6.622
112.5	7.106	3.279	2.058	2.420	3.737	4.276	4.072	4.318	4.873	5.350
115.0	7.242	2.875	1.822	2.117	2.938	3.607	3.805	3.849	4.369	4.745
117.5	5.619	2.774	1.654	1.884	2.470	3.006	3.568	3.481	4.000	4.275
120.0	5.077	2.740	1.553	1.883	2.139	2.605	3.067	3.212	3.728	4.004
122.5	4.536	2.738	1.520	1.748	2.103	2.240	2.601	2.811	3.191	3.567
125.0	3.327	2.504	1.553	1.648	1.738	2.040	2.204	2.512	2.791	3.200
127.5	2.877	2.503	1.451	1.513	1.570	1.738	1.902	2.310	2.589	2.995
130.0	3.212	2.402	1.351	1.413	1.471	1.606	1.770	2.144	2.455	2.762
132.5	3.954	2.301	1.249	1.278	1.404	1.505	1.603	1.742	2.286	2.593
135.0	3.960	2.537	1.216	1.211	1.304	1.372	1.503	1.709	1.915	2.459
137.5	3.825	2.504	1.013	1.042	1.170	1.338	1.403	1.675	1.749	2.153
140.0	3.623	2.504	0.9793	0.9756	1.137	1.305	1.403	1.675	1.749	1.886
142.5	3.419	2.504	0.9793	0.9756	1.137	1.305	1.403	1.675	1.749	1.886
145.0	2.946	2.504	0.9810	0.9756	1.137	1.305	1.403	1.675	1.749	1.886
147.5	2.270	2.501	1.183	0.9756	1.137	1.305	1.403	1.675	1.749	1.886
150.0	1.467	2.094	1.284	0.9767	1.137	1.305	1.403	1.675	1.749	1.886
152.5	1.120	1.725	1.317	1.077	1.137	1.305	1.403	1.675	1.749	1.886
155.0	1.117	1.422	1.317	1.144	1.137	1.305	1.403	1.675	1.749	1.886
157.5	1.117	1.387	1.317	1.178	1.137	1.305	1.403	1.675	1.749	1.886
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

**Photometric Data Table [cd]**

G/C	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0
0.0	721.9	721.3	721.6	721.8	721.7	721.8	721.3	721.4	721.6	721.5
2.5	734.0	734.3	734.8	733.9	734.3	733.4	732.2	731.4	730.4	729.4
5.0	754.8	755.1	752.1	747.2	744.9	740.5	737.0	732.9	729.2	726.9
7.5	756.7	752.2	744.4	736.5	731.2	724.3	719.4	713.2	709.0	706.4
10.0	750.7	745.4	738.3	734.3	731.8	726.4	723.4	716.0	709.9	704.6
12.5	758.0	752.1	747.8	742.4	737.1	727.7	720.7	712.3	703.2	697.5
15.0	765.9	758.3	752.4	739.7	728.7	716.2	707.7	697.2	688.9	682.2
17.5	775.9	758.0	742.0	728.0	717.5	705.3	696.7	684.5	674.1	665.3
20.0	784.6	759.4	736.1	717.7	698.0	685.0	677.9	669.1	660.6	655.5
22.5	797.9	764.1	727.2	702.1	689.6	680.9	673.0	660.0	647.8	638.3
25.0	805.9	766.3	730.7	701.5	686.4	675.4	668.5	652.2	635.9	624.9
27.5	817.0	778.3	742.4	709.3	686.5	668.8	660.2	640.4	622.3	607.3
30.0	819.5	797.7	756.0	715.4	683.3	659.4	645.8	613.2	589.8	575.0
32.5	824.3	807.9	766.9	710.2	663.6	640.5	637.6	608.0	586.7	567.6
35.0	850.8	813.1	761.2	711.2	669.0	639.1	629.3	591.3	567.7	553.0
37.5	859.0	829.4	780.7	718.2	667.1	634.5	617.1	578.9	550.1	529.6
40.0	859.6	843.2	794.9	735.6	667.9	615.6	594.9	560.2	529.8	509.3
42.5	866.5	844.7	821.2	772.9	696.7	622.8	586.7	549.2	520.3	496.9
45.0	865.3	853.3	861.7	828.1	744.0	634.0	581.6	546.2	513.3	487.2
47.5	854.0	860.1	869.9	870.1	798.5	671.4	596.3	554.1	511.3	474.7
50.0	830.2	867.4	897.7	906.8	854.4	703.3	594.1	549.5	503.4	465.6
52.5	805.6	879.2	917.5	924.7	896.0	759.8	633.4	580.0	530.1	477.7
55.0	811.8	888.4	910.8	916.8	893.5	785.4	666.6	605.9	555.3	504.4
57.5	836.0	891.3	900.9	879.9	854.6	755.5	687.6	646.6	600.1	549.4
60.0	680.5	856.4	889.1	857.9	830.5	787.0	754.3	709.9	659.8	602.6
62.5	588.6	772.3	822.2	821.4	872.0	843.0	793.3	750.0	696.5	648.6
65.0	476.0	668.9	758.5	841.3	952.9	1006	938.7	866.7	806.9	751.5
67.5	348.9	576.4	754.3	876.8	986.2	1052	1027	953.4	872.7	798.9
70.0	261.4	511.6	755.8	933.8	1046	1071	1021	962.5	924.8	882.0
72.5	198.8	458.4	782.2	1075	1294	1465	1400	1255	1119	1022
75.0	144.5	377.5	667.4	939.9	1227	1452	1414	1250	1001	854.1
77.5	109.7	265.8	460.2	584.8	788.9	1010	1075	990.2	758.4	585.9
80.0	80.38	180.1	296.9	354.3	386.6	632.1	696.4	624.5	453.7	276.2
82.5	60.11	111.4	176.6	202.5	183.7	276.1	236.3	189.9	149.6	105.7
85.0	56.45	78.41	116.4	137.4	134.3	132.8	134.3	110.2	86.70	75.71
87.5	48.83	59.24	72.74	83.92	91.06	87.70	79.78	65.52	56.11	49.49
90.0	33.31	38.52	45.59	48.75	52.59	53.78	48.68	40.30	35.21	32.28
92.5	31.93	31.66	35.10	37.96	38.32	36.53	34.50	32.69	30.63	29.12
95.0	26.89	29.33	30.68	31.84	32.66	31.47	29.84	29.99	29.52	27.73
97.5	21.22	23.02	22.89	23.40	26.37	26.38	24.88	24.45	23.91	22.63
100.0	20.41	18.76	17.87	18.02	22.75	22.87	21.54	21.00	20.51	19.93
102.5	19.66	22.98	20.29	16.28	20.11	20.53	18.59	17.65	17.42	17.87
105.0	14.75	22.04	21.54	14.86	16.92	19.77	18.76	16.49	15.09	15.37
107.5	10.85	18.04	19.40	12.98	14.08	19.66	19.02	16.45	13.56	13.69
110.0	7.633	12.33	14.97	10.83	12.92	18.38	18.37	15.73	11.99	11.81
112.5	6.125	8.164	9.746	8.583	10.71	13.29	13.81	13.24	11.06	10.18
115.0	5.285	6.079	6.795	6.945	8.328	9.548	10.21	10.51	9.624	9.207
117.5	4.814	5.337	5.755	6.208	7.020	7.708	8.113	8.347	8.322	8.134
120.0	4.478	4.865	5.252	5.672	6.250	6.705	7.014	7.156	7.162	7.166
122.5	4.139	4.493	4.913	5.335	5.780	6.070	6.348	6.525	6.531	6.531
125.0	3.605	4.057	4.379	4.836	5.346	5.638	5.917	6.095	6.101	6.066
127.5	3.300	3.615	3.904	4.295	4.804	5.162	5.378	5.524	5.629	5.593
130.0	3.066	3.347	3.571	3.963	4.338	4.597	4.881	4.997	5.101	5.161
132.5	2.897	3.144	3.402	3.727	4.035	4.228	4.446	4.596	4.634	4.691
135.0	2.730	2.976	3.201	3.491	3.734	3.994	4.147	4.261	4.368	4.391
137.5	2.625	2.873	3.099	3.357	3.564	3.757	3.877	3.995	4.099	4.154
140.0	2.290	2.771	3.031	3.224	3.430	3.590	3.744	3.764	3.900	3.921
142.5	2.022	2.332	2.894	3.121	3.262	3.456	3.544	3.630	3.733	3.753
145.0	2.022	2.232	2.425	2.818	3.156	3.385	3.440	3.495	3.566	3.618
147.5	2.022	2.232	2.392	2.485	2.623	2.852	3.041	3.229	3.364	3.416
150.0	2.022	2.232	2.392	2.485	2.590	2.752	2.843	2.931	2.968	3.116
152.5	2.022	2.232	2.392	2.485	2.590	2.752	2.875	2.898	3.000	2.983
155.0	2.022	2.232	2.358	2.519	2.590	2.685	2.742	2.799	2.867	2.916
157.5	2.022	2.231	2.324	2.384	2.488	2.584	2.574	2.665	2.767	2.748
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:



**Photometric Data Table [cd]**

G/C	100.0	105.0	110.0	115.0	120.0	125.0	130.0	135.0	140.0	145.0
0.0	721.7	720.6	721.3	721.1	721.2	721.2	722.2	721.3	722.1	721.9
2.5	728.0	725.3	724.7	722.7	721.0	719.5	717.9	714.5	713.4	710.9
5.0	723.5	719.2	718.2	715.4	713.9	710.9	709.4	705.8	703.6	700.0
7.5	701.1	695.5	693.1	688.6	685.9	679.8	678.2	673.3	671.2	669.5
10.0	695.5	687.4	682.4	674.6	670.3	663.4	657.4	649.8	642.5	636.9
12.5	686.5	675.6	668.6	659.4	654.5	644.5	638.4	628.5	618.0	609.1
15.0	670.3	658.1	649.4	640.1	634.2	621.4	612.9	600.6	589.1	577.4
17.5	654.1	641.6	631.5	617.5	610.5	593.3	583.4	569.6	554.9	541.9
20.0	644.1	630.4	615.2	596.5	587.9	571.2	559.1	538.4	517.4	499.3
22.5	623.4	607.2	591.8	573.1	562.1	541.0	524.5	505.1	480.8	458.5
25.0	609.6	588.2	569.6	549.3	535.1	509.8	489.5	464.8	443.6	414.5
27.5	589.5	571.1	552.6	531.7	509.2	479.3	454.3	422.0	391.8	364.5
30.0	557.9	537.8	517.0	500.7	480.6	450.2	418.8	384.6	346.0	305.5
32.5	545.5	517.5	492.6	464.3	441.9	413.8	382.8	340.7	298.4	259.5
35.0	528.4	498.9	468.0	438.1	406.4	371.3	337.5	292.0	253.3	225.1
37.5	506.3	479.0	447.5	415.5	381.7	343.2	292.2	250.8	218.1	201.9
40.0	482.8	449.7	417.6	384.4	353.3	308.7	256.7	212.6	192.7	187.1
42.5	465.5	428.2	392.7	354.9	320.1	270.8	227.7	190.9	174.0	174.0
45.0	453.8	416.3	376.0	330.9	289.0	234.9	195.6	172.8	165.7	163.1
47.5	434.6	388.8	347.2	308.9	261.9	207.7	171.2	158.9	157.9	157.9
50.0	424.6	380.2	335.5	285.3	235.4	182.2	156.4	147.4	149.3	152.2
52.5	424.7	366.3	314.6	262.7	213.1	164.1	144.0	137.8	140.1	148.5
55.0	446.1	375.7	308.0	244.6	189.0	145.5	133.2	128.9	132.9	140.9
57.5	484.9	403.2	315.4	236.2	171.4	133.7	121.9	122.0	132.0	133.2
60.0	532.4	446.2	346.7	239.0	161.2	126.1	116.8	115.7	118.9	124.6
62.5	578.0	490.7	384.5	256.8	154.6	118.4	111.3	112.1	113.5	116.3
65.0	671.2	575.2	444.0	300.8	167.9	115.8	107.5	109.1	108.3	105.4
67.5	710.9	605.3	476.6	315.9	187.8	114.9	110.6	114.8	109.2	102.1
70.0	799.9	672.9	517.9	350.6	196.6	132.2	122.0	117.1	110.4	105.9
72.5	924.1	785.2	593.5	388.2	230.4	145.9	120.5	114.1	105.1	102.8
75.0	795.8	742.9	624.7	449.6	267.4	155.9	115.2	102.9	95.94	92.03
77.5	496.1	474.9	474.6	404.3	303.0	177.7	112.2	93.45	82.84	79.06
80.0	219.0	221.0	247.4	279.5	242.0	178.2	110.2	81.31	67.70	67.06
82.5	94.58	92.62	113.5	166.4	179.4	161.1	103.9	69.28	54.64	54.46
85.0	69.07	63.42	64.87	83.48	124.5	123.8	102.6	64.40	42.40	42.40
87.5	45.57	41.85	42.34	48.49	66.52	86.18	84.40	53.09	38.89	36.50
90.0	31.52	29.85	30.35	32.61	41.73	49.84	50.07	40.36	26.51	22.04
92.5	27.26	25.56	24.58	24.07	26.26	28.39	33.40	34.72	21.66	18.87
95.0	24.56	22.87	21.76	20.00	19.64	21.71	23.67	26.53	18.82	15.91
97.5	21.64	20.42	19.15	17.27	16.25	16.90	16.74	18.71	16.53	14.02
100.0	19.49	18.20	16.98	15.10	13.97	13.93	13.15	13.80	14.60	14.05
102.5	18.35	16.40	15.05	13.40	12.35	12.03	11.37	11.11	14.58	13.16
105.0	17.54	16.53	14.75	12.12	11.14	11.62	10.90	9.265	11.62	10.55
107.5	16.90	16.35	14.84	10.90	9.930	10.91	9.613	7.722	8.374	7.831
110.0	15.54	15.35	13.98	10.52	8.784	9.131	7.897	6.447	5.767	6.200
112.5	13.11	12.36	11.24	9.250	7.777	7.331	6.489	5.644	5.065	5.267
115.0	10.12	9.510	8.635	7.815	7.037	6.296	5.652	5.108	4.598	4.436
117.5	8.039	7.734	7.333	6.914	6.430	5.827	5.249	4.807	4.463	3.969
120.0	7.067	6.896	6.632	6.315	5.927	5.426	4.979	4.670	4.226	3.603
122.5	6.529	6.425	6.197	5.914	5.623	5.157	4.677	4.334	3.859	3.370
125.0	6.061	5.958	5.798	5.516	5.256	4.792	4.410	4.001	3.626	3.205
127.5	5.586	5.550	5.359	5.112	4.950	4.556	4.275	3.933	3.524	3.137
130.0	5.153	5.083	4.960	4.781	4.616	4.423	4.174	3.867	3.458	3.038
132.5	4.748	4.713	4.692	4.546	4.447	4.256	4.006	3.732	3.424	2.971
135.0	4.476	4.475	4.422	4.344	4.280	4.122	3.904	3.665	3.357	2.938
137.5	4.141	4.207	4.188	4.144	4.143	3.953	3.803	3.597	3.289	2.938
140.0	3.973	4.039	3.988	3.945	3.976	3.853	3.703	3.463	3.223	2.938
142.5	3.805	3.871	3.820	3.844	3.840	3.685	3.568	3.362	3.223	2.938
145.0	3.702	3.701	3.684	3.675	3.604	3.484	3.433	3.328	3.223	2.938
147.5	3.467	3.465	3.417	3.375	3.402	3.317	3.298	3.261	3.222	2.938
150.0	3.231	3.197	3.217	3.208	3.234	3.183	3.197	3.160	3.088	2.938
152.5	3.031	3.097	3.117	3.109	3.133	3.116	3.097	3.059	2.988	2.971
155.0	2.897	2.963	2.950	2.976	2.999	2.949	2.929	2.925	2.887	2.805
157.5	2.795	2.760	2.815	2.808	2.830	2.815	2.861	2.790	2.719	2.670
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

**Photometric Data Table [cd]**

G/C	150.0	155.0	160.0	165.0	170.0	175.0	180.0	185.0	190.0	195.0
0.0	721.4	721.5	721.2	722.0	720.7	721.5	721.5	721.8	721.9	721.4
2.5	708.8	708.4	707.1	707.2	705.4	706.8	708.9	709.2	710.5	711.5
5.0	697.0	694.3	690.5	689.0	685.8	685.0	687.0	687.4	690.0	691.1
7.5	669.5	671.9	670.2	666.6	662.0	659.7	659.1	659.3	660.3	661.7
10.0	633.8	635.8	637.1	636.8	633.3	630.2	627.0	627.5	626.9	628.2
12.5	601.5	600.5	598.5	597.5	597.5	593.9	590.8	591.1	591.8	595.2
15.0	569.5	563.7	561.5	556.0	554.7	553.8	549.8	549.1	552.5	558.9
17.5	531.5	523.2	517.5	511.2	504.4	503.4	505.8	507.1	509.0	514.4
20.0	492.0	480.2	471.1	461.0	453.0	450.3	456.1	454.9	458.8	462.5
22.5	447.2	429.4	418.8	405.4	393.8	387.9	394.0	393.6	396.2	405.0
25.0	395.0	373.9	358.2	343.4	333.0	323.6	328.9	329.9	333.8	344.2
27.5	335.4	313.5	295.9	284.3	275.4	266.2	269.9	271.8	274.5	285.6
30.0	281.0	261.1	247.6	239.4	236.4	233.7	235.7	236.0	236.1	241.2
32.5	235.8	225.4	222.0	223.7	226.1	229.6	231.9	229.2	225.9	225.5
35.0	210.6	212.5	218.3	220.4	225.6	230.7	230.1	228.7	224.1	222.9
37.5	199.0	204.5	210.3	212.3	219.1	224.5	226.1	223.8	218.5	216.4
40.0	189.5	192.6	202.6	212.5	218.4	225.6	227.4	223.4	219.2	211.3
42.5	181.5	186.8	200.2	213.2	219.0	228.8	229.5	226.0	220.9	210.3
45.0	173.3	188.1	195.0	211.9	221.8	228.9	229.2	224.2	224.0	210.3
47.5	167.7	183.5	195.5	209.2	222.5	228.8	228.1	226.8	224.8	212.1
50.0	159.3	179.5	193.9	208.5	218.1	225.0	229.4	226.2	221.2	207.6
52.5	155.6	170.9	193.0	201.8	214.4	216.4	221.4	219.1	211.5	199.5
55.0	151.0	162.2	182.2	185.7	196.1	194.8	201.7	197.3	194.8	184.6
57.5	140.3	148.0	161.1	166.8	173.1	171.3	174.8	177.7	173.2	169.4
60.0	129.7	134.2	143.0	153.8	160.7	160.8	159.0	162.9	161.3	158.6
62.5	115.9	120.0	133.7	142.6	149.7	144.9	155.8	149.1	149.6	149.2
65.0	106.3	114.9	118.9	129.5	134.0	133.4	133.5	133.1	135.3	134.7
67.5	101.3	104.3	108.0	116.7	123.5	128.6	131.2	135.3	123.7	114.6
70.0	103.0	94.92	97.03	110.4	111.9	109.5	118.9	108.9	113.0	111.0
72.5	94.29	101.3	108.8	108.6	102.7	100.3	82.37	94.16	100.0	104.7
75.0	91.25	104.5	105.7	109.8	104.7	103.5	108.0	102.2	115.4	104.3
77.5	88.32	94.36	108.8	96.79	96.34	86.18	107.2	88.33	97.23	99.39
80.0	73.37	87.86	78.08	80.28	73.80	69.82	67.40	80.27	71.64	82.83
82.5	57.68	63.59	63.13	61.39	59.50	58.58	52.44	49.12	59.95	63.70
85.0	48.43	48.84	46.41	47.84	45.47	54.15	38.32	49.80	50.83	52.15
87.5	38.80	36.40	38.02	35.10	38.72	36.84	53.16	41.82	45.78	36.62
90.0	23.86	24.80	23.35	21.11	14.73	14.94	14.53	16.64	14.56	19.07
92.5	18.05	17.48	16.26	11.87	9.653	9.654	7.626	9.988	10.26	11.86
95.0	15.41	16.72	16.74	52.05	10.45	5.373	4.729	5.979	7.681	55.73
97.5	13.25	20.77	34.72	32.09	5.670	4.096	3.717	4.412	6.394	24.01
100.0	15.40	23.34	19.11	27.51	6.073	3.025	2.738	3.022	7.153	15.51
102.5	11.37	16.42	14.72	22.82	6.286	2.453	2.298	2.675	4.310	8.438
105.0	8.703	10.05	13.02	26.44	3.902	1.985	1.996	2.305	3.554	7.612
107.5	7.001	6.655	12.91	23.96	2.731	1.918	1.963	2.199	2.643	5.807
110.0	5.136	5.320	11.86	15.98	2.628	1.917	1.963	2.233	2.634	4.878
112.5	4.306	4.657	7.144	10.31	2.325	1.816	1.963	2.166	2.466	4.878
115.0	3.938	4.584	4.705	4.978	2.091	1.682	1.963	2.165	2.465	6.055
117.5	3.573	3.912	4.140	3.051	2.078	1.615	1.997	2.199	2.499	4.103
120.0	3.437	3.211	4.161	4.334	4.027	1.616	2.032	2.199	2.600	3.129
122.5	3.137	2.712	3.185	2.428	2.125	1.684	2.202	2.300	2.700	4.027
125.0	2.873	2.513	2.154	2.227	2.124	1.783	2.399	2.165	2.634	2.557
127.5	2.771	2.312	2.086	1.990	1.686	1.547	2.065	2.165	2.330	2.557
130.0	2.672	2.312	2.053	1.823	1.619	1.481	2.098	2.233	2.364	2.557
132.5	2.605	2.312	2.053	1.823	1.619	1.481	2.269	2.402	2.465	2.691
135.0	2.605	2.312	2.053	1.823	1.619	1.481	2.505	2.571	2.668	2.725
137.5	2.605	2.312	2.053	1.823	1.620	1.484	2.508	2.605	2.634	2.859
140.0	2.605	2.312	2.087	1.891	1.755	1.784	2.776	2.875	2.904	3.027
142.5	2.606	2.380	2.223	2.060	1.992	2.053	2.978	3.011	3.073	3.028
145.0	2.639	2.513	2.390	2.229	2.227	2.222	2.944	3.011	3.073	3.028
147.5	2.705	2.513	2.390	2.330	2.295	2.424	2.944	3.011	3.073	3.028
150.0	2.672	2.513	2.457	2.430	2.462	2.524	2.944	3.011	3.073	3.028
152.5	2.672	2.513	2.457	2.430	2.462	2.524	2.944	3.045	3.006	3.028
155.0	2.672	2.513	2.457	2.430	2.462	2.524	2.877	2.943	2.938	2.960
157.5	2.572	2.513	2.457	2.430	2.462	2.524	2.741	2.842	2.803	2.826
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

**Photometric Data Table [cd]**

G/C	200.0	205.0	210.0	215.0	220.0	225.0	230.0	235.0	240.0	245.0
0.0	722.2	721.5	721.6	722.1	722.1	722.3	721.9	721.3	721.6	721.8
2.5	712.8	712.9	713.5	714.2	714.6	715.2	717.1	716.5	716.7	718.4
5.0	692.3	691.5	692.0	692.4	693.2	692.9	695.3	696.9	698.4	701.7
7.5	663.1	662.5	665.3	669.9	675.1	680.8	687.0	691.8	694.8	699.1
10.0	633.5	635.6	641.0	650.8	657.5	662.1	667.0	672.2	675.2	680.3
12.5	600.9	608.0	613.3	619.9	627.2	632.9	639.6	647.9	653.7	659.5
15.0	568.3	574.6	575.6	581.9	590.2	598.7	610.4	622.3	632.1	641.5
17.5	523.9	531.6	534.1	543.9	557.1	570.4	585.1	604.2	615.4	625.1
20.0	474.1	484.2	490.3	507.4	524.5	541.2	554.8	571.8	581.9	597.8
22.5	424.1	435.6	450.3	466.8	486.1	501.6	517.0	545.1	561.6	578.1
25.0	361.0	380.2	400.7	418.9	441.9	462.9	488.6	515.0	529.1	546.1
27.5	296.6	318.9	339.2	366.9	397.3	423.3	450.2	475.9	502.2	524.1
30.0	247.8	265.1	283.3	311.6	345.5	381.2	412.0	445.2	474.2	501.0
32.5	222.8	228.7	238.2	259.4	296.8	336.8	376.4	409.4	449.2	471.4
35.0	215.8	213.0	213.0	223.8	253.5	290.4	333.8	383.8	408.1	439.2
37.5	206.4	201.7	197.4	204.4	219.0	246.7	292.9	340.7	376.4	407.7
40.0	201.0	192.5	187.8	189.7	192.8	215.8	253.5	302.7	342.3	380.6
42.5	196.0	187.3	183.8	176.8	177.4	189.1	220.6	265.5	316.1	353.9
45.0	197.4	187.2	174.5	167.0	164.3	170.9	193.7	236.5	283.2	324.2
47.5	191.4	186.8	169.6	159.6	157.4	158.4	169.5	202.0	249.7	298.3
50.0	191.2	182.5	163.7	153.7	148.6	145.3	151.5	176.1	224.2	272.3
52.5	190.2	175.1	158.2	148.5	140.1	135.4	137.1	156.6	197.7	248.3
55.0	179.5	165.4	149.8	140.8	132.4	125.2	127.2	139.2	174.9	228.3
57.5	160.3	149.5	137.9	131.1	124.6	119.5	117.8	126.4	158.0	215.3
60.0	145.1	132.0	128.0	121.8	117.4	112.9	111.5	116.7	142.8	204.9
62.5	134.6	122.0	113.1	110.5	109.5	107.1	104.9	109.9	135.3	212.2
65.0	119.5	112.6	104.4	100.1	103.8	104.4	100.8	106.1	138.4	245.6
67.5	103.9	101.4	98.25	97.05	98.87	103.5	104.8	103.8	142.7	266.9
70.0	94.95	90.05	94.47	97.75	96.40	104.7	103.9	117.2	157.0	301.5
72.5	104.5	93.51	89.43	96.03	90.76	96.05	100.6	117.2	188.8	335.1
75.0	105.1	99.74	90.06	84.68	82.29	85.85	95.52	120.8	214.4	403.1
77.5	99.21	89.78	81.28	76.16	73.91	75.84	93.31	124.6	238.9	364.1
80.0	77.70	78.84	67.00	66.78	61.28	68.95	81.53	145.5	202.1	247.6
82.5	58.80	58.90	57.12	56.55	48.00	54.69	72.33	135.9	152.3	161.5
85.0	50.07	46.66	50.67	45.11	40.85	50.26	67.23	112.1	116.2	91.60
87.5	39.34	32.09	34.79	35.11	34.79	42.90	63.37	78.23	69.96	49.71
90.0	24.22	21.05	20.45	20.33	21.35	30.07	43.43	47.71	39.41	31.47
92.5	14.51	16.27	16.92	17.94	17.92	24.37	30.67	26.56	25.57	22.90
95.0	29.71	17.16	15.67	14.09	15.79	19.97	21.93	19.09	18.98	18.77
97.5	35.55	28.21	17.51	13.14	14.98	16.15	16.01	15.19	15.53	16.55
100.0	22.98	26.62	19.82	17.12	15.57	13.93	12.70	13.00	13.46	14.66
102.5	19.22	18.68	14.64	16.02	15.37	12.58	12.10	13.32	13.24	13.84
105.0	13.08	13.55	8.323	11.37	13.45	9.905	11.33	12.92	12.91	13.11
107.5	14.00	7.966	6.565	8.103	11.29	8.172	9.958	11.61	11.57	12.04
110.0	12.94	6.725	5.042	6.249	7.099	6.738	8.256	10.01	10.17	11.75
112.5	11.61	6.924	4.414	5.467	5.700	6.038	6.956	8.102	8.437	9.890
115.0	7.053	5.721	4.341	4.722	4.945	5.559	6.302	6.829	7.546	8.094
117.5	3.544	3.715	4.274	4.254	4.709	5.255	5.796	6.254	6.871	7.152
120.0	3.410	3.146	4.074	3.986	4.340	4.952	5.392	5.816	6.266	6.549
122.5	3.476	3.079	3.744	3.721	4.107	4.615	4.959	5.448	5.799	6.084
125.0	3.009	3.078	3.311	3.520	3.905	4.416	4.820	5.110	5.461	5.581
127.5	2.809	3.078	3.273	3.417	3.835	4.211	4.583	4.937	5.087	5.172
130.0	2.875	3.078	3.273	3.383	3.667	4.009	4.381	4.532	4.650	4.703
132.5	2.942	3.078	3.273	3.383	3.599	3.874	4.112	4.294	4.447	4.434
135.0	2.942	3.145	3.273	3.383	3.498	3.739	3.943	4.091	4.177	4.232
137.5	3.009	3.145	3.273	3.383	3.498	3.605	3.842	3.956	4.009	3.997
140.0	3.042	3.145	3.273	3.383	3.498	3.638	3.774	3.821	3.874	3.863
142.5	3.042	3.145	3.273	3.383	3.498	3.537	3.606	3.652	3.672	3.628
145.0	3.042	3.145	3.273	3.383	3.532	3.571	3.639	3.584	3.605	3.560
147.5	3.042	3.145	3.206	3.350	3.398	3.436	3.471	3.415	3.436	3.392
150.0	3.042	3.078	3.206	3.249	3.297	3.335	3.370	3.381	3.335	3.291
152.5	2.976	3.045	3.073	3.149	3.263	3.268	3.302	3.347	3.301	3.258
155.0	2.909	2.911	2.939	2.981	3.061	3.133	3.100	3.178	3.167	3.123
157.5	2.841	2.777	2.805	2.847	2.926	2.964	2.999	3.009	2.998	2.989
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

**Photometric Data Table [cd]**

G/C	250.0	255.0	260.0	265.0	270.0	275.0	280.0	285.0	290.0	295.0
0.0	721.7	721.8	721.3	721.4	721.6	721.5	721.7	720.6	721.3	721.1
2.5	718.9	719.3	719.7	721.3	722.8	723.4	725.2	724.9	726.2	727.0
5.0	705.9	708.6	711.6	715.5	717.9	720.3	723.3	723.4	725.3	726.7
7.5	705.7	709.6	712.2	718.2	722.0	725.6	731.4	733.7	737.4	741.0
10.0	687.3	694.2	699.1	707.8	713.2	718.6	727.2	731.1	735.9	742.4
12.5	666.5	673.9	678.6	687.5	694.1	699.8	709.4	715.6	724.6	736.0
15.0	654.3	668.2	679.7	692.3	701.1	708.2	717.3	722.4	727.0	733.0
17.5	636.2	647.7	661.1	674.2	685.1	694.9	706.7	716.6	727.0	738.4
20.0	614.5	629.3	642.2	654.7	664.8	674.3	687.6	695.8	703.9	719.7
22.5	596.1	608.7	620.2	635.2	648.7	659.6	673.7	681.2	686.4	699.8
25.0	567.6	584.8	600.9	617.2	630.8	643.7	662.3	675.0	684.8	698.9
27.5	545.0	561.4	578.0	595.2	612.5	633.2	653.8	667.7	683.0	703.4
30.0	525.2	543.1	563.9	582.8	601.5	617.1	638.1	649.8	662.8	692.6
32.5	494.7	523.1	546.1	564.0	582.5	606.5	634.5	645.1	657.5	686.9
35.0	466.4	492.6	518.1	540.3	562.5	586.4	615.1	636.1	655.3	691.9
37.5	436.5	469.7	497.7	517.9	539.0	566.0	597.2	616.5	639.3	695.1
40.0	419.8	444.9	471.7	496.4	523.5	553.3	578.5	603.2	647.4	706.6
42.5	393.2	422.4	453.1	482.4	514.7	548.7	573.2	596.6	658.6	751.5
45.0	361.7	401.4	436.5	465.7	496.9	526.0	556.4	599.2	689.0	790.3
47.5	337.9	377.2	414.7	450.9	490.3	529.9	565.4	614.9	747.4	848.8
50.0	317.7	360.0	398.4	440.5	483.2	526.7	570.1	642.1	787.1	870.7
52.5	295.0	345.2	392.1	442.5	485.7	537.1	577.1	675.5	818.3	884.0
55.0	281.4	345.0	406.3	459.6	514.0	566.3	603.6	708.3	841.4	889.4
57.5	283.4	353.9	428.7	490.2	542.1	598.1	635.9	696.8	809.9	868.2
60.0	292.0	385.2	463.4	525.2	576.5	639.1	683.7	719.9	777.9	814.0
62.5	323.5	432.7	527.7	567.5	593.7	652.1	716.3	796.2	829.0	797.3
65.0	381.5	514.8	624.0	667.8	700.7	752.1	797.4	872.6	904.1	811.7
67.5	431.7	560.0	667.1	717.4	743.8	816.3	899.0	924.2	946.6	859.5
70.0	464.4	616.3	734.9	785.7	779.2	825.7	878.8	967.4	1017	924.4
72.5	547.4	740.4	903.9	990.8	1010	1101	1166	1307	1285	1089
75.0	638.2	806.4	867.3	872.7	830.5	1020	1299	1443	1324	1054
77.5	472.4	596.2	581.0	584.3	572.1	744.4	935.4	1029	928.1	669.8
80.0	300.0	315.6	288.9	300.7	349.7	503.1	628.1	653.4	485.7	355.2
82.5	143.2	127.9	120.9	118.1	137.4	171.8	220.6	265.1	191.6	203.8
85.0	67.16	68.24	71.93	72.11	72.47	81.24	89.11	109.7	128.3	128.7
87.5	43.88	43.77	44.76	45.72	45.43	49.45	49.70	69.62	77.49	60.50
90.0	28.62	28.21	29.16	29.23	29.20	31.09	33.76	42.40	40.07	33.91
92.5	22.55	23.59	24.75	25.88	25.40	25.49	24.99	27.47	27.62	24.61
95.0	20.20	21.52	22.52	24.56	24.48	23.58	22.92	23.76	22.89	17.77
97.5	18.25	19.62	20.42	21.09	20.25	19.39	19.53	20.44	18.92	14.61
100.0	16.46	18.03	19.50	19.17	17.96	17.01	18.13	19.33	17.84	14.51
102.5	15.78	18.79	21.35	19.68	16.25	14.67	21.66	23.99	19.33	16.17
105.0	15.41	19.06	21.63	18.04	14.85	12.70	23.85	25.83	18.41	14.07
107.5	14.14	16.97	20.21	15.52	12.99	11.34	23.30	24.56	16.52	12.49
110.0	12.85	14.90	17.79	12.99	11.20	10.07	20.98	22.52	16.09	10.13
112.5	10.75	12.77	15.18	11.84	10.87	9.062	16.01	15.56	11.58	7.316
115.0	8.612	9.698	10.80	9.164	9.035	8.111	9.901	9.298	7.877	5.984
117.5	7.298	7.549	7.790	7.630	7.400	6.973	6.903	6.430	6.067	5.381
120.0	6.727	6.847	6.923	6.797	6.568	6.302	6.130	5.725	5.498	4.881
122.5	6.228	6.382	6.420	6.270	6.107	5.871	5.530	5.291	5.162	4.650
125.0	5.691	5.813	5.892	5.737	5.601	5.363	5.119	4.887	4.666	4.218
127.5	5.248	5.336	5.318	5.164	5.002	4.727	4.547	4.479	4.258	3.845
130.0	4.811	4.801	4.750	4.633	4.469	4.225	4.110	4.075	3.890	3.578
132.5	4.508	4.498	4.414	4.232	4.068	3.922	3.907	3.838	3.621	3.377
135.0	4.272	4.229	4.113	3.965	3.868	3.788	3.772	3.636	3.453	3.243
137.5	4.036	3.960	3.879	3.765	3.668	3.553	3.536	3.468	3.252	3.043
140.0	3.868	3.826	3.779	3.665	3.601	3.520	3.402	3.300	3.118	2.909
142.5	3.633	3.592	3.545	3.432	3.401	3.353	3.234	3.065	2.950	2.775
145.0	3.532	3.491	3.444	3.431	3.334	3.218	3.166	2.963	2.816	2.642
147.5	3.363	3.289	3.344	3.232	3.201	3.050	2.930	2.795	2.682	2.507
150.0	3.229	3.289	3.277	3.099	3.034	2.883	2.896	2.761	2.615	2.474
152.5	3.229	3.155	3.110	3.032	2.968	2.849	2.796	2.727	2.548	2.407
155.0	3.061	3.020	2.976	2.932	2.867	2.715	2.728	2.593	2.414	2.307
157.5	2.926	2.919	2.842	2.765	2.700	2.648	2.627	2.458	2.313	2.240
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

**Photometric Data Table [cd]**

G/C	300.0	305.0	310.0	315.0	320.0	325.0	330.0	335.0	340.0	345.0
0.0	721.2	721.2	722.2	721.3	722.1	721.9	721.4	721.5	721.2	722.0
2.5	728.6	729.1	731.9	731.2	733.2	734.8	735.5	735.5	736.0	736.3
5.0	729.5	730.1	734.4	736.6	740.9	743.5	744.2	745.5	746.8	749.3
7.5	745.4	747.7	752.1	754.1	756.8	757.8	758.9	762.6	764.2	766.5
10.0	750.6	754.8	764.1	769.1	776.2	778.5	779.6	778.4	780.7	784.5
12.5	747.2	755.2	768.4	777.6	787.6	793.4	801.7	804.6	806.9	810.2
15.0	741.2	746.6	763.4	781.4	797.6	810.5	825.4	838.9	852.1	857.7
17.5	750.4	757.4	764.5	779.2	808.6	834.4	858.2	875.4	887.4	905.3
20.0	740.0	757.6	780.4	802.9	832.8	859.5	883.8	905.6	915.7	927.0
22.5	719.6	746.9	789.5	823.1	862.6	888.9	902.6	919.4	925.4	930.4
25.0	723.8	749.2	785.1	837.7	869.8	892.5	904.4	920.1	928.9	941.1
27.5	735.4	764.0	804.6	830.7	862.9	881.6	904.5	929.3	936.3	954.2
30.0	727.4	782.7	821.5	831.5	840.6	874.4	893.8	920.5	928.8	954.3
32.5	741.6	786.7	824.2	833.5	846.2	847.9	864.4	897.5	911.1	920.7
35.0	753.4	798.6	819.3	835.8	838.2	818.7	824.6	853.8	858.0	887.0
37.5	767.1	803.9	842.0	833.6	835.3	810.6	792.3	827.8	857.9	843.4
40.0	765.8	811.7	857.3	852.7	840.9	812.5	779.9	783.5	775.1	715.1
42.5	802.7	822.0	852.8	875.3	838.6	784.8	756.6	650.5	627.9	549.3
45.0	850.0	845.9	868.2	858.1	842.5	763.6	633.6	510.5	456.0	376.0
47.5	878.8	857.2	859.9	853.2	815.3	670.8	498.1	364.2	296.8	247.9
50.0	891.1	858.7	822.4	811.4	744.9	567.9	366.8	266.4	216.4	175.7
52.5	892.9	857.1	812.1	755.0	629.1	463.1	291.6	208.0	160.8	140.9
55.0	894.5	863.5	807.0	649.3	516.1	379.7	247.6	159.5	134.3	130.3
57.5	881.2	879.8	773.2	572.7	404.6	328.7	210.6	137.9	122.8	137.6
60.0	863.4	845.8	709.3	497.4	329.4	271.2	182.7	123.7	119.4	131.6
62.5	780.6	787.2	631.5	413.6	264.1	223.3	156.6	111.4	122.6	124.4
65.0	736.4	679.1	514.9	336.9	202.7	181.6	136.1	102.0	114.1	120.7
67.5	751.2	602.3	389.2	245.7	149.4	140.5	113.2	101.5	99.79	108.6
70.0	768.4	555.4	295.0	167.5	104.4	108.9	98.10	89.24	93.77	86.92
72.5	858.1	508.4	224.9	115.7	77.43	88.64	81.78	71.87	66.08	67.35
75.0	756.3	480.6	171.1	83.41	65.94	73.52	71.29	57.40	54.29	51.93
77.5	474.8	305.7	127.3	64.04	56.17	61.75	52.44	48.06	44.58	40.51
80.0	300.2	200.8	87.21	54.58	49.73	51.02	43.42	39.01	35.96	32.29
82.5	189.8	120.3	58.62	47.09	40.84	38.17	34.55	31.45	29.16	26.05
85.0	100.9	71.94	48.25	42.10	38.52	33.49	28.76	26.24	24.64	22.53
87.5	56.51	41.59	33.47	32.00	29.43	29.57	24.44	26.73	24.84	20.40
90.0	32.87	27.06	21.39	19.85	17.02	17.74	16.68	15.99	16.36	15.35
92.5	21.46	19.03	18.07	14.70	15.05	14.45	13.39	12.69	13.42	13.31
95.0	17.12	12.21	12.33	16.36	17.31	16.24	13.63	12.47	12.13	10.48
97.5	13.35	11.47	11.09	15.74	14.60	12.69	11.18	17.33	14.64	8.893
100.0	14.58	16.22	17.52	17.94	13.01	13.91	11.49	15.56	11.08	7.604
102.5	21.97	29.01	13.77	13.86	10.20	10.35	9.802	14.65	9.840	6.958
105.0	19.61	24.51	8.418	12.10	7.249	7.543	7.612	10.05	8.784	6.612
107.5	17.45	19.49	8.982	10.01	6.189	6.095	6.064	7.104	7.887	5.768
110.0	14.66	15.06	8.215	6.287	5.237	5.275	4.976	5.945	7.012	4.522
112.5	9.420	8.543	5.551	4.756	4.473	4.152	3.984	5.134	5.238	4.088
115.0	5.765	5.261	4.680	4.237	4.028	3.639	3.641	4.390	4.578	4.084
117.5	5.021	4.657	4.410	3.901	3.793	3.405	3.206	3.550	3.836	4.050
120.0	4.617	4.390	4.175	3.733	3.391	3.072	2.906	2.682	3.065	3.882
122.5	4.178	3.893	3.510	3.168	2.959	2.771	2.739	2.383	2.760	3.180
125.0	3.707	3.485	3.131	2.791	2.585	2.404	2.538	2.211	2.592	3.308
127.5	3.505	3.117	2.896	2.589	2.384	2.271	2.338	2.211	1.987	3.240
130.0	3.202	2.849	2.694	2.422	2.183	2.071	2.205	2.211	1.718	2.567
132.5	3.000	2.748	2.559	2.354	2.082	2.003	2.038	2.211	1.716	1.891
135.0	2.898	2.580	2.424	2.219	2.081	2.003	1.937	2.044	1.750	1.249
137.5	2.797	2.513	2.323	2.152	2.081	2.003	1.937	2.010	1.884	1.249
140.0	2.663	2.413	2.222	2.152	2.081	2.003	1.937	1.910	2.019	1.350
142.5	2.528	2.313	2.222	2.085	2.081	2.003	1.937	1.910	2.019	1.552
145.0	2.494	2.279	2.222	2.085	2.081	2.003	1.937	1.910	1.986	1.990
147.5	2.393	2.212	2.222	2.085	2.081	2.003	1.937	1.910	1.952	2.025
150.0	2.359	2.212	2.155	2.085	2.081	2.003	1.937	1.910	1.952	2.025
152.5	2.325	2.212	2.155	2.085	2.081	2.003	1.937	1.910	1.952	2.025
155.0	2.258	2.212	2.087	2.085	2.081	2.003	1.937	1.910	1.952	2.025
157.5	2.190	2.111	2.087	2.085	2.081	2.003	1.937	1.976	1.952	2.025
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

Test Report No. P296C

**Photometric Data Table [cd]**

G/C	350.0	355.0
0.0	720.7	721.5
2.5	734.4	734.3
5.0	750.1	750.3
7.5	766.7	770.3
10.0	784.2	790.6
12.5	811.9	819.7
15.0	857.0	864.2
17.5	898.8	900.1
20.0	928.6	926.9
22.5	938.4	941.0
25.0	958.5	979.1
27.5	983.5	1032
30.0	983.5	1009
32.5	936.4	939.0
35.0	888.0	867.1
37.5	814.3	781.4
40.0	631.7	603.5
42.5	469.8	450.2
45.0	311.2	295.3
47.5	215.1	204.5
50.0	158.8	164.1
52.5	143.9	151.0
55.0	143.6	136.5
57.5	139.2	146.6
60.0	139.9	157.9
62.5	141.9	158.1
65.0	134.9	144.0
67.5	113.4	116.2
70.0	86.51	95.06
72.5	64.60	58.18
75.0	50.38	43.87
77.5	36.78	32.13
80.0	29.49	26.33
82.5	24.01	22.60
85.0	22.04	19.87
87.5	19.24	17.58
90.0	13.02	12.08
92.5	10.78	10.24
95.0	9.083	9.194
97.5	8.873	8.688
100.0	8.904	7.147
102.5	7.433	6.801
105.0	6.642	6.191
107.5	5.677	5.394
110.0	5.261	5.014
112.5	4.661	4.714
115.0	3.643	4.409
117.5	3.407	4.071
120.0	3.609	3.298
122.5	3.142	2.433
125.0	3.373	2.895
127.5	3.407	3.500
130.0	3.104	3.399
132.5	2.733	3.265
135.0	2.057	2.962
137.5	1.181	2.323
140.0	1.147	1.651
142.5	1.180	1.146
145.0	1.315	1.178
147.5	1.754	1.245
150.0	1.990	1.413
152.5	1.956	1.783
155.0	1.956	1.918
157.5	1.956	1.918
160.0	0	0
162.5	0	0
165.0	0	0
167.5	0	0
170.0	0	0
172.5	0	0
175.0	0	0
177.5	0	0
180.0	0	0

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks:

### Test Methods

Luminous Intensity Distribution were measured using Everfine Goniospectrophotometer (EVERFINE GO-R5000) with a HAAS-2000 spectrometer in the midfield geometry. Tested according to IES LM-79-2019. Test distance exceeds five times the greatest luminous opening of luminaires. The sample was tested in the orientation for its intended use. Determined in accordance with the current IES published procedures. Laboratory result may not be representative of field performance. Absolute photometry taken. All photometric measurement equipment was calibrated using a 530W omni-directional Everfine halogen standard flux lamp (D908S). All measurements are traceable to NIST. The spectral and color angular uniformity measurements were done using the HAAS-2000 spectrometer positioned at the midfield in front of the secondary mirror.

All measurements were performed when the device under test was operated long enough to reach stabilization. Stability is reached when the variation of three readings of the light output and electrical power over a period of 30 min, taken 10 minutes apart, is less than 0.5 %. The maximum uncertainty for gonio measured luminous flux for an indoor luminaire is +/- 3.8% and +/- 0.5% for CCT measurements (k = 2) based on the GO-R5000 Measurement Uncertainty Analysis conducted by Everfine.

### Applicable Standards and Operating Equipment

- IES LM-79:2019 (Sec. 7) Solid State Lighting Luminaires - Total Flux Measurements and Intensity Distribution (Luminous Efficacy)
- ANSI C82.77:2002 Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment
- GO-R5000 Measurement Uncertainty Analysis document

Equipment	Manufacturer	Model
Goniospectrophotometer	Everfine Corporation	EVERFINE GO-R5000_V2 SYSTEM V2.00.463
Spectrometer	Everfine	HAAS-2000
Digital Power Meter	Yokogawa	WT230
DC Power Supply (CC and CV)	Everfine Corporation	WY12010
Spectral Luminous Flux Standard	Everfine Corporation	D908S
AC Power Source	Everfine Corporation	PCR 1000WH

Revision History		
Date:	Rev. #	Comment
Mar. 27, 2024	0	Initial Issue

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### END OF REPORT

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.8°C  
 Operators: Charles  
 Test Date: 27 March 2024

y Range: 0 - 180DEG  
 y Interval: 2.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.463  
 Humidity: 26.2%  
 Test Distance: 26.000m [K=0.8358]  
 Remarks: