



Catalog Number 71462
UPC Number 60198671462
Description LED Vandal Resistant Canopy Light
40W
Voltage: 120/277



Features

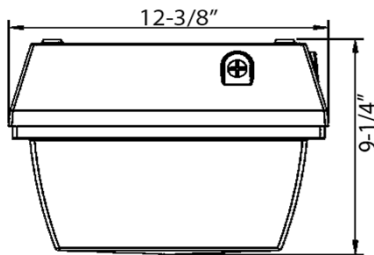
Corrosion Die Cast Aluminum Housing
Prismatic Polycarbonate Lens
Superior Architectural Bronze Powder Coat Finish
Phillips LUMILED LUXEON 3030 LED's
Stainless Steel Hardware
50,000+ Hour Life Expectancy
UL Listed

General

Material: Diecast Aluminum Housing
Lens: Prismatic Polycarbonate Lens
Finish: Bronze Powdercoat
Lamp Type: LED
Reflector: Aluminum
Photocell: Optional

Dimension Information

Length: 12-3/8"
Height: 9-1/4"



Specifications

Temperature Rating: -40F to 131F
Voltage Rating: 120/277
Flammability Rating: UL94V-2
Wattage Rating: 40W
Light Pattern: 129 deg Beam Angle
CRI: 85

Packaging

Box Qty 1

Certifications

cULus Yes
CSA Yes
RoHS Yes
DLC Yes
IP65(Nema 4X) Yes
Warranty 5 Year



LM-79-08 Test Report

For

Morris Products Inc.

53 Carey Rd
Queensbury, NY 12804

Brand Name: Morris

Ceiling light

Model: 71462

Laboratory: Leading Testing Laboratories

NVLAP CODE: 200960-0
No.180S, DongLiu road, BinJiang District, Hangzhou, China
Tel: +86-571-56680806 www.ledtestlab.com

Report No.: HZ1511004lf

The laboratory that conducted the testing detailed in this report has been accredited for SSL by NVLAP.

Reviewed by:

Engineer: April Zou
Dec. 08, 2015



Manager: Jim Zhang
Dec. 08, 2015

Note: This report does not imply product certification approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Test Summary

Sample Tested: 71462

Luminous Efficacy (Lumens /Watt)	Total Luminous Flux (Lumens)	Power (Watts)	Power Factor
96.7	3692.6	38.18	0.9832
CCT (K)	CRI	Stabilization Time (Light & Power)	BUG (Back, Up, Glare) Rating
5070	84.8	60	B1-U3-G1

Table 1: Executive Data Summary

Test specifications:

Date of Receipt : Nov. 30, 2015

Date of Test : Dec. 03, 2015

Test item : Total Luminous Flux, Luminous Distribution Intensity, Luminous Efficacy, Correlated Color Temperature, Color Rendering Index, Chromaticity Coordinate, Electrical parameters

Reference Standard : IESNA LM-79-2008 Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products

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Sample Photos



Figure 1- Overview of the sample

Equipment Under Test (EUT)

Name	: Ceiling light
Model	: 71462
Electrical Ratings	: 120~277VAC, 50/60Hz, 40W
Product Description	: 5000K, Fuel Pup Canopy luminaires
Manufacturer	: Morris Products Inc.
Address	: 53 Carey Rd Queensbury, NY 12804

TEST RESULTS

Test ambient temperature was 24.2°C.

Base orientation was Light down. Test was conducted without a dimmer in the circuit.

The stabilization time of the sample was 60 minutes, and the total operating time including stabilization was 85 minutes.

Parameter	Result	
Test Voltage (V)	120.0	277.0
Voltage frequency (Hz)	60	60
Test Current (A)	0.324	0.163
Power Factor	0.9832	0.8713
Test Power (W)	38.18	39.25
THD A%	14.83	19.37
Luminous Efficacy (lm/W)	96.7	
Total Luminous Flux (lm)	3692.6	
Color Rendering Index (CRI)	84.8	
R9	15	
Correlated Color Temperature (CCT) (K)	5070	
Chromaticity (Chroma x, Chroma y)	(0.3435, 0.3553)	
Chromaticity (Chroma u, Chroma v)	(0.2090, 0.3241)	
Chromaticity (Chroma u , Chroma v)	(0.2090, 0.4862)	
Duv	0.0024	
Average Beam Angle (°)	129.6	
Center Beam Candle Power (cd)	833	
Spacing Criteria	1.59 (0°-180°)/ 1.53(90°-270°)	
Zonal Lumens in the 0°-60°Zone	72.08%	
Zonal Lumens in the 60°-90°Zone	20.43%	
Zonal Lumens in the 90°-120°Zone	5.53%	
Zonal Lumens in the 120°-180°Zone	1.96%	

Special Color Rendering Indices	
R1	83
R2	90
R3	94
R4	84
R5	84
R6	86
R7	88
R8	70
R9	15
R10	76
R11	84
R12	65
R13	85
R14	97

Table 2: Test data per Goniophotometer Method

Note: According to CIE 1976 (u , v) diagram, $u = u = 4x/(-2x+12y+3)$, $v = 3v/2 = 9y/(-2x+12y+3)$.

Spectral Power Distribution

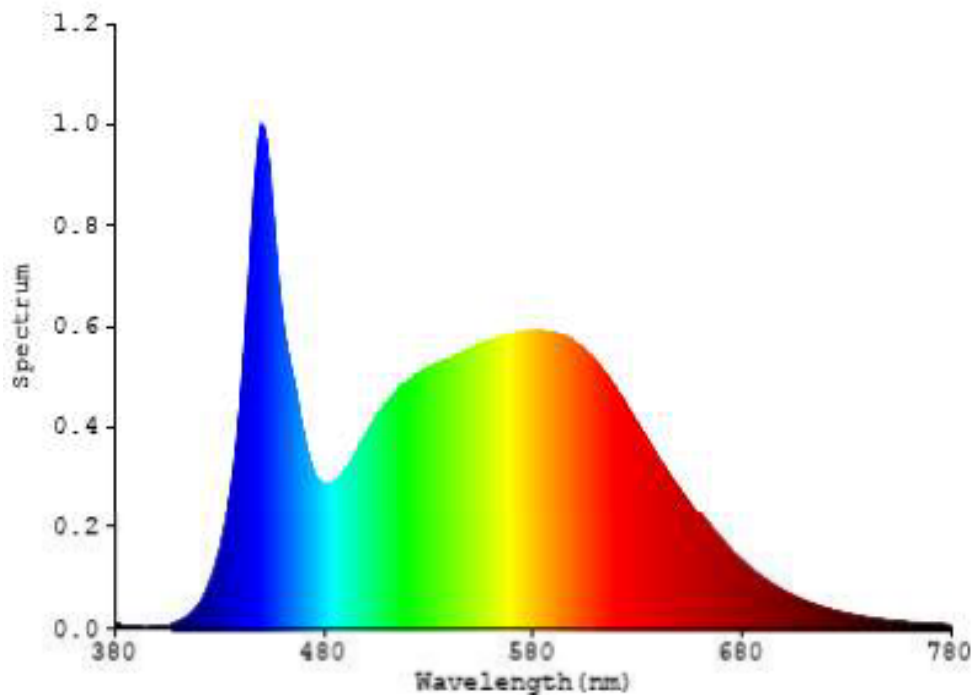


Chart 1: Spectral Power Distribution

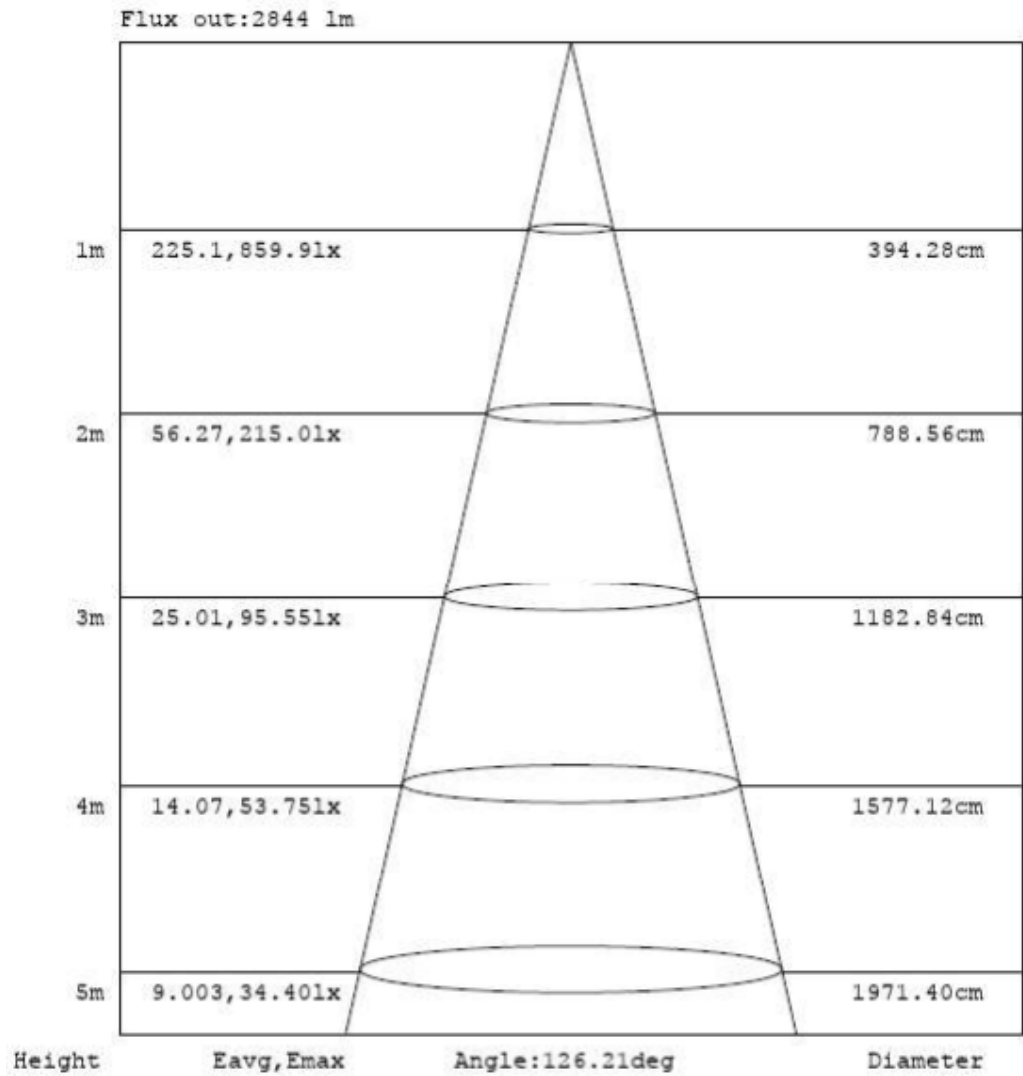
Zonal Lumen Tabulation

$\gamma(^{\circ})$	Lumens	% Total
0- 10	81.307	2.20%
10- 20	245.273	6.64%
20- 30	414.694	11.23%
30- 40	582.976	15.79%
40- 50	696.155	18.85%
50- 60	641.331	17.37%
60- 70	433.854	11.75%
70- 80	213.336	5.78%
80- 90	107.109	2.90%
90-100	74.278	2.01%
100-110	68.081	1.84%
110-120	61.823	1.67%
120-130	44.634	1.21%
130-140	19.347	0.52%
140-150	6.779	0.18%
150-160	1.295	0.04%
160-170	0.242	0.01%
170-180	0.086	0.00%
Total	3692.6	100%

$\gamma(^{\circ})$	Lumens	% Total
0- 60	2661.736	72.08%
60- 90	754.299	20.43%
0-90	3416.035	92.51%
90- 180	276.565	7.49%
0- 180	3692.6	100%

Table 3: Zonal Lumen Data

Illuminance Plots



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

Chart 2: Beam Angle

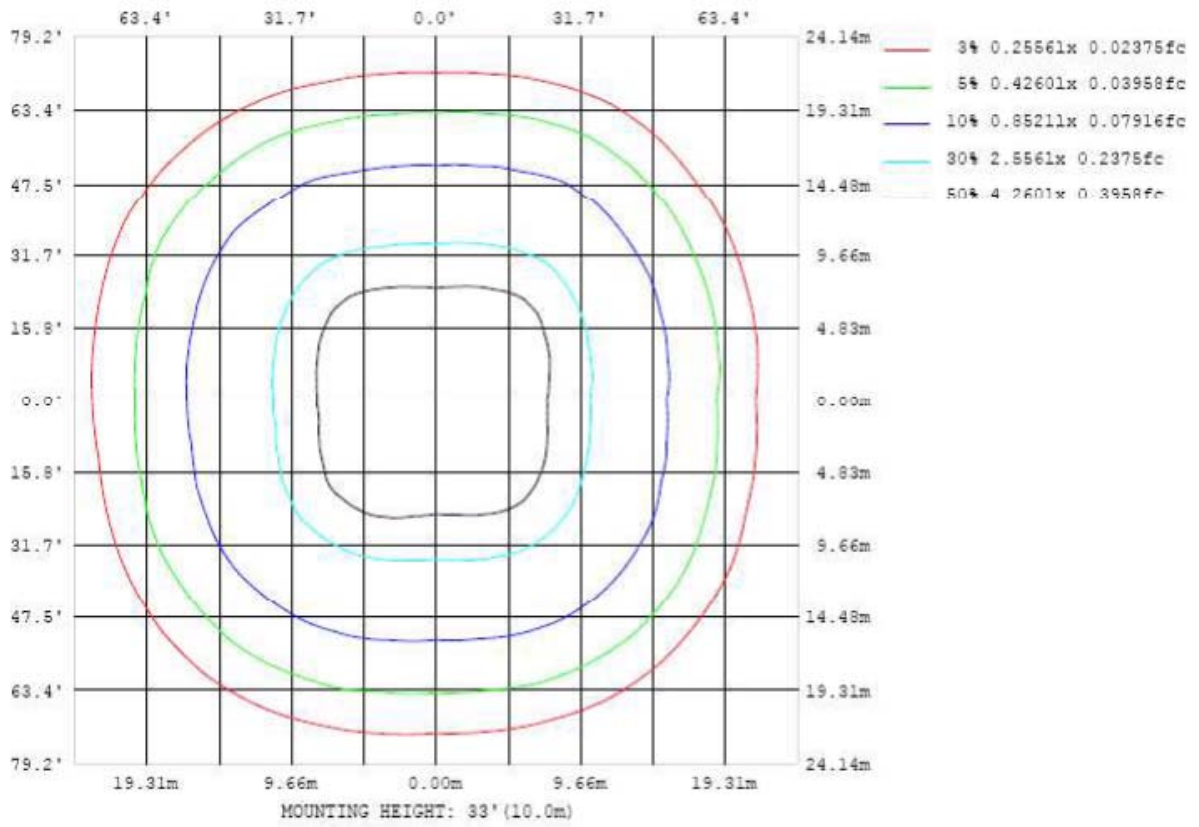


Chart 3: Illuminance Plot (Footcandles)

Luminous Intensity Distribution Plots

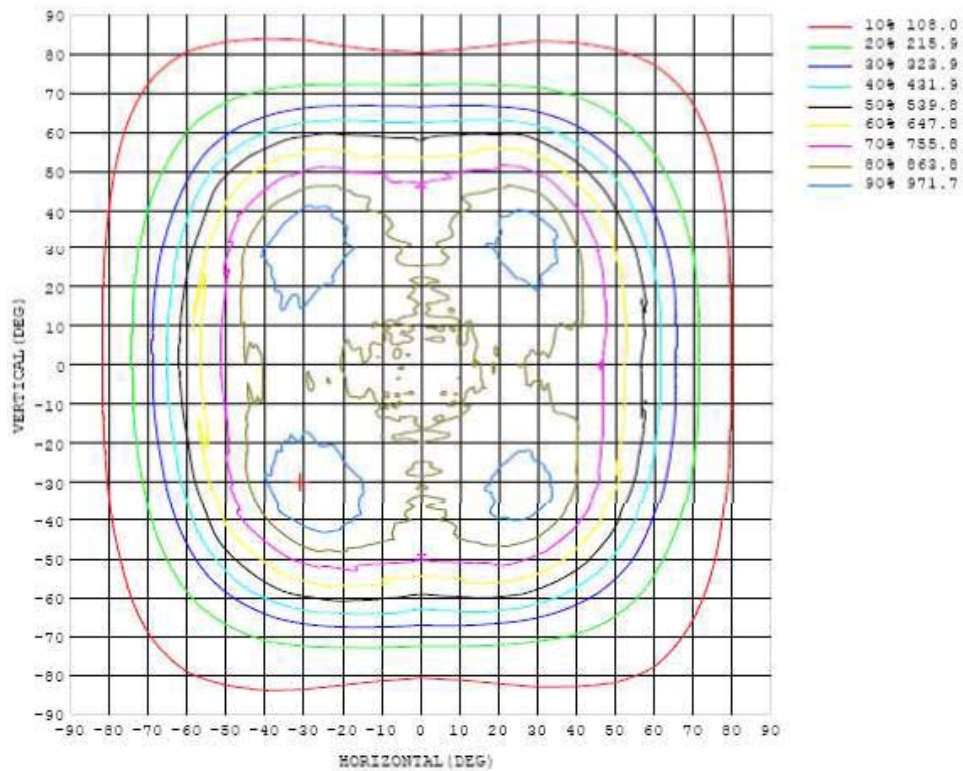


Chart 4: Isocandela Plot

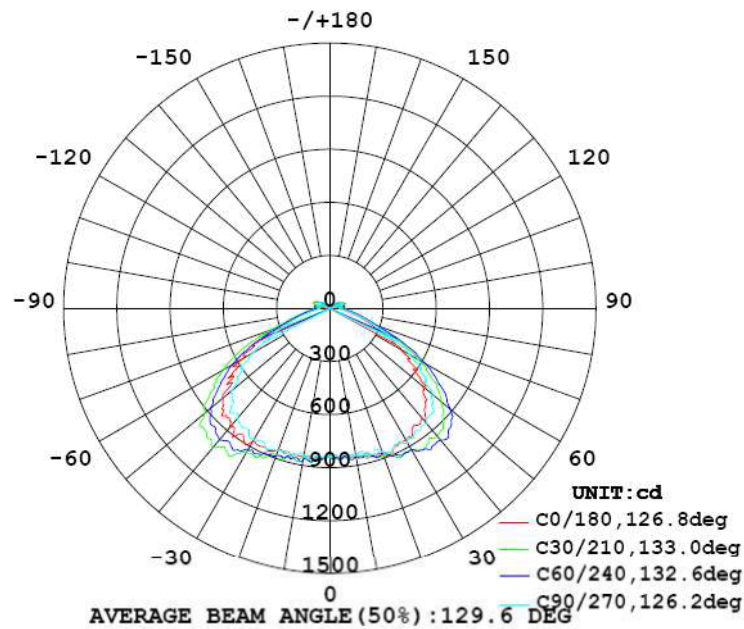


Chart 5: Polar Candela Distribution

Luminous Intensity Data

Table--1 UNIT: cd

C (DEG) \ y (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833
5	847	857	845	843	860	856	846	834	834	821	831	836	859	854	851	851	853	868	855
10	854	846	867	841	843	863	852	855	856	842	856	853	858	870	841	849	850	849	851
15	861	856	859	867	871	850	848	865	857	852	868	868	842	862	867	871	860	850	861
20	872	874	878	889	902	898	864	872	875	862	881	858	880	900	868	870	861	869	852
25	862	872	894	926	923	924	914	891	868	857	874	904	925	915	918	897	879	868	866
30	856	866	895	919	958	956	921	910	890	871	890	916	930	963	971	929	885	875	869
35	818	838	889	950	995	998	977	914	861	846	873	934	992	1021	1010	986	915	881	869
40	815	829	886	945	997	1030	972	918	867	853	880	946	997	1070	1038	1001	938	881	881
45	763	792	830	907	984	1005	957	903	844	830	863	910	983	1053	1046	980	910	866	861
50	682	712	756	821	887	911	886	808	784	765	799	830	901	954	985	908	846	807	790
55	605	632	697	717	763	771	761	737	656	625	662	700	700	634	645	707	730	713	664
60	464	480	532	574	631	621	620	586	543	524	555	611	662	680	719	680	625	564	569
65	333	351	374	418	454	453	452	436	399	381	410	464	505	528	536	513	481	430	441
70	232	245	263	281	292	291	285	272	263	255	271	291	321	344	342	334	312	299	302
75	160	171	180	197	207	207	200	191	184	179	188	197	213	226	224	219	206	198	202
80	101	114	125	139	148	147	141	131	122	115	124	134	147	158	156	148	137	126	127
85	66.2	77.3	91.5	103	107	106	102	93.3	80.7	74.5	82.9	95.5	105	111	110	106	95.8	83.5	80.7
90	54.8	62.5	75.1	84.3	86.7	85.4	82.9	74.8	63.0	59.5	64.6	76.3	85.1	88.9	88.5	87.2	77.9	66.0	61.8
95	52.2	54.8	58.7	75.6	82.2	83.0	84.0	74.7	62.8	59.7	63.7	75.3	85.5	85.7	83.1	77.0	65.5	60.4	60.7
100	23.2	24.9	42.3	44.2	57.8	72.9	82.0	75.7	68.4	67.1	68.4	74.9	80.3	69.6	53.7	37.1	36.4	23.6	15.2
105	80.3	62.5	79.0	80.8	49.9	51.9	59.7	61.0	64.6	65.7	63.2	58.7	57.0	49.7	56.9	97.3	79.5	82.1	90.4
110	84.4	63.9	78.1	91.7	78.8	54.9	38.0	31.1	36.8	38.0	34.9	26.7	34.9	59.4	89.2	98.3	77.5	84.8	94.9
115	79.4	59.9	70.1	79.6	80.5	80.8	58.0	38.7	35.0	33.6	35.7	38.3	56.1	82.5	85.2	87.1	70.4	80.2	92.8
120	63.6	47.3	53.5	62.2	66.7	70.7	62.5	66.6	64.0	63.3	64.7	64.9	56.9	66.7	69.2	68.0	52.3	62.7	74.9
125	46.5	33.9	36.4	45.2	51.4	49.7	54.3	64.1	67.1	68.2	65.8	61.1	50.3	44.9	50.7	48.1	34.8	45.0	55.1
130	23.4	23.8	20.5	29.3	30.4	32.5	43.5	52.1	54.7	55.7	53.1	48.9	39.9	29.9	27.9	29.2	20.1	26.9	12.5
135	15.4	15.7	10.3	12.2	15.8	25.0	33.3	38.8	41.3	42.3	40.0	36.4	30.9	23.5	15.0	9.70	9.68	16.4	18.8
140	4.35	3.43	0.98	0.91	11.7	19.6	26.2	29.3	31.4	32.3	30.8	28.1	24.9	18.5	11.2	0.90	0.93	2.31	5.84
145	0.96	0.83	0.91	0.90	4.21	14.0	18.8	22.1	23.9	24.7	23.7	21.5	18.3	13.6	4.32	0.85	0.87	0.90	0.97
150	0.90	0.91	0.88	0.89	0.86	2.84	11.4	14.4	16.2	16.8	16.2	14.2	11.3	5.44	0.83	0.82	0.76	0.86	0.96
155	0.85	0.87	0.80	0.85	0.82	0.81	0.81	4.17	7.66	8.23	7.83	4.87	0.79	0.81	0.81	0.82	0.76	0.85	0.93
160	0.83	0.85	0.84	0.79	0.81	0.78	0.77	0.77	0.75	0.73	0.74	0.78	0.79	0.81	0.82	0.77	0.83	0.85	0.93
165	0.84	0.85	0.86	0.86	0.80	0.76	0.76	0.74	0.72	0.71	0.73	0.78	0.80	0.80	0.81	0.86	0.87	0.86	0.92
170	0.85	0.86	0.86	0.86	0.84	0.78	0.74	0.71	0.73	0.71	0.71	0.77	0.80	0.85	0.87	0.87	0.87	0.86	0.95
175	0.94	0.94	0.93	0.93	0.93	0.89	0.87	0.86	0.84	0.81	0.86	0.89	0.90	0.92	0.94	0.94	0.94	0.94	0.97
180	0.94	0.96	0.96	0.98	0.99	0.98	0.95	0.94	0.97	0.90	0.92	0.94	0.99	0.99	0.96	0.95	0.94	0.93	0.92

Table 4: Luminous Intensity Data

Table--2 UNIT: cd

C (DEG) \ y (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833		
5	857	851	863	860	854	839	846	838	831	840	839	842	849	860	859	855	852		
10	856	858	854	868	870	866	880	850	842	860	865	868	847	863	846	858	847		
15	874	874	870	872	869	876	875	873	857	869	866	868	867	870	857	860	872		
20	853	867	882	900	902	883	878	877	855	868	865	882	884	904	896	871	863		
25	877	911	922	917	930	912	899	879	863	883	894	898	921	916	931	916	885		
30	886	926	940	966	962	922	899	861	850	859	889	924	957	953	925	902	871		
35	890	947	1002	1016	1012	961	882	841	826	845	891	972	995	990	972	919	853		
40	907	944	1030	1055	1039	971	893	838	809	842	900	954	1017	1019	953	910	848		
45	895	918	986	1048	1041	937	869	818	785	828	888	939	1013	986	935	852	807		
50	819	863	923	970	951	880	791	744	725	761	792	873	930	877	824	764	725		
55	607	760	902	922	940	760	672	606	594	612	709	764	790	742	711	647	599		
60	598	665	695	715	659	636	565	514	500	528	579	625	618	608	562	542	492		
65	460	520	546	538	509	472	411	372	359	374	416	457	445	435	405	386	355		
70	315	327	350	348	331	304	273	258	248	262	271	285	288	281	273	261	252		
75	213	218	231	230	222	205	186	177	169	179	187	200	203	199	192	182	176		
80	138	147	157	159	155	144	128	118	110	119	130	142	145	143	136	127	118		
85	91.5	103	110	112	110	104	92.0	78.9	71.7	81.9	93.8	103	105	104	99.6	92.0	79.0		
90	69.8	81.7	87.9	88.9	88.4	85.5	74.6	62.9	58.6	65.4	76.1	84.1	84.7	83.9	82.3	74.7	61.3		
95	64.2	69.8	79.0	84.5	86.2	87.9	75.7	64.3	61.4	66.4	77.0	85.0	81.9	79.5	76.0	66.3	58.0		
100	19.7	33.1	48.0	62.6	76.9	84.4	76.6	70.7	70.2	73.1	78.5	82.6	70.9	53.7	35.2	27.9	14.0		
105	70.5	89.3	77.6	54.1	57.2	62.6	63.5	67.0	69.5	68.4	64.1	60.3	51.0	51.2	85.8	72.1	71.5		
110	71.7	89.1	98.5	76.3	50.3	37.0	31.8	39.2	41.1	38.2	30.7	35.6	54.6	81.4	91.6	70.6	76.3		
115	68.7	83.0	87.3	84.6	73.3	46.1	31.5	28.1	27.6	31.4	34.0	53.6	78.2	79.7	80.5	63.9	74.2		
120	54.4	64.2	68.5	69.4	66.6	54.4	56.0	55.1	55.5	58.3	59.9	60.2	67.8	65.8	63.2	48.3	61.7		
125	39.2	44.6	49.5	50.8	43.4	49.6	60.3	64.9	67.3	65.8	60.9	49.3	46.9	50.1	45.2	32.4	45.6		
130	23.9	23.2	31.4	28.8	30.1	40.0	48.4	52.9	55.2	53.6	50.0	40.2	29.0	30.5	29.4	20.1	17.5		
135	17.1	11.9	13.1	16.6	25.0	31.4	36.6	40.3	42.2	40.5	37.5	32.1	24.0	15.5	10.8	12.7	18.4		
140	4.13	1.00	0.96	12.5	19.5	24.7	27.8	30.7	32.0	30.6	28.1	25.0	19.3	11.0	0.96	2.32	5.51		
145	0.88	0.96	0.97	3.99	13.4	17.5	20.3	22.3	23.3	22.4	20.2	17.6	12.9	0.92	0.94	0.94	0.97		
150	0.96	0.96	0.96	0.94	1.67	10.6	13.4	15.2	15.9	15.0	13.2	10.1	0.91	0.91	0.93	0.88	0.95		
155	0.94	0.90	0.95	0.94	0.91	0.89	1.00	5.73	7.22	5.35	0.89	0.90	0.90	0.91	0.93	0.90	0.93		
160	0.95	0.94	0.90	0.94	0.92	0.91	0.89	0.87	0.84	0.86	0.89	0.91	0.90	0.91	0.91	0.94	0.93		
165	0.93	0.95	0.95	0.92	0.92	0.91	0.88	0.86	0.83	0.83	0.86	0.89	0.87	0.88	0.93	0.93	0.92		
170	0.96	0.98	0.99	1.00	0.99	0.95	0.91	0.87	0.86	0.84	0.84	0.86	0.87	0.92	0.95	0.95	0.94		
175	0.97	1.00	1.00	1.01	0.99	0.97	0.94	0.90	0.89	0.87	0.90	0.89	0.89	0.94	0.96	0.96	0.96		
180	0.92	0.95	0.96	0.98	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.92	0.94	0.95	0.95	0.93	0.92		

Table 5: Luminous Intensity Data

EQUIPMENT LIST

Test Equipment	Model	Equipment No.	Calibration Date	Calibration Due date
Goniophotometer system	GO-R5000	HZTE011-01	Jul. 17, 2015	Jul. 16, 2016
Digital Power Meter	PF2010A	HZTE028-01	Jul. 17, 2015	Jul. 16, 2016
AC Power Supply	PCR 500L	HZTE001-08	Jul. 17, 2015	Jul. 16, 2016
DC Power Supply	WY12010	HZTE004-03	Jul. 17, 2015	Jul. 16, 2016
Temperature Meter	TES1310	HZTE017-01	Jul. 17, 2015	Jul. 16, 2016
Standard Source	D908	HZTE012-01	Jul. 23, 2015	Jul. 22, 2016
Standard source	SCL-1400	HZTE012-02	Oct. 21, 2015	Oct. 20, 2016

Table 6: Test Equipment List

TEST METHODS

Seasoning of SSL Product

For the purpose of rating new SSL products, SSL products shall be tested with no seasoning. Therefore, no seasoning was performed.

Goniophotometer Method

Photometric and Electrical Measurements

An EVERFINE Type C Model GO-R5000 Goniophotometer was used to measure the intensity at each angle of distribution for each sample. The photometric distance is 2.475m for near-field measurement or 30m for far-field measurement. Bandwidth of spectroradiometer is 380nm-780nm.

Ambient temperature was measured at the same height of the sample mounted on the Goniophotometer equipment. Each SSL unit was operated on the client provided driver at the rated input voltage in its designated orientation.

The stabilization time typically ranges from 30 min (small integrated LED lamps) to 2 or more hours for large SSL luminaires). It can be judged that stability is reached when the variation (maximum - minimum) of at least 3 readings of the light output and electrical power over a period of 30 min, taken 15 minutes apart, is less than 0.5 %.

Electrical measurements including voltage, current, and power were measured using the Everfine Digital Power Meter.

Some graphics were created with Photometric Plus software.

The standard reference of the Goniophotometer system is halogen incandescent lamp, the intensity distribution type is omni-directional, and is traceable to the National Institute of Metrology P.R. China.

The uncertainty of goniophotometer system reported in this document is expended uncertainty is 1.94% with a coverage factor k=2.

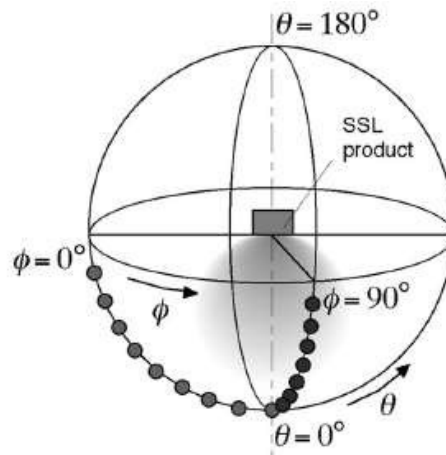
Color Characteristics Measurements

The color characteristics of SSL products include chromaticity coordinates, correlated color temperature, and color rendering index. These characteristics of SSL products may be spatially non-uniform, and thus, in order that they can be specified accurately, the color quantities shall be measured as values that are spatially average, weighted to intensity, over the angular range where light is intentionally emitted from the SSL product. The color characteristics measurements are using gonio-spectroradiometer.

Color Spatial Uniformity

The characteristics of SSL products may be spatially non-uniform, the chromaticity coordinate shall be measured at two vertical planes ($C=0^\circ/180^\circ$ and $C=90^\circ/270^\circ$) and at 10° or less intervals for vertical angle until the light output dropped to below 10% of the peak intensity. The averaged weighted chromaticity coordinate was calculated from these points. The data was then analyzed to check for delta color differences of the u' , v' chromaticity coordinates. The spatial non-uniformity of chromaticity, $\Delta u'v'$, is determined as the maximum deviation (distance on the CIE (u' , v') diagram) among all measured points from the spatially averaged chromaticity coordinate.

The geometry for the chromaticity measurement using gonio-spectroradiometer is shown as following.



*** End of Report ***

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