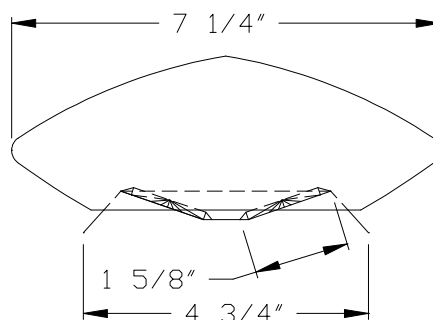




INDEPENDENT TEST LABORATORY REPORT No. 27936

ENLUX LIGHTING - 6K OUTDOOR AREA LIGHT, CAT# 6K-12-III
WITH SILVER INTERIOR AND NO LENS
SEVENTY TWO LEDS. LUMINAIRE OUTPUT: 7289 Lms.
LUMINAIRE OPERATING AT 120 VAC AND 112.8 WATTS

IESNA CUTOFF CLASSIFICATION: FULL CUTOFF



PREPARED FOR:

ENLUX LIGHTING
TEMPE, AZ

DATE: OCT 15, 2010

CERTIFIED BY:

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
BALLAST FACTORS HAVE NOT BEEN APPLIED

TESTED IN 30 PLANES LEFT SIDE, 30 PLANES RIGHT SIDE, LEFT AND RIGHT AVERAGED

VERTICAL TEST INCREMENTS ARE 2.5 DEGREES.

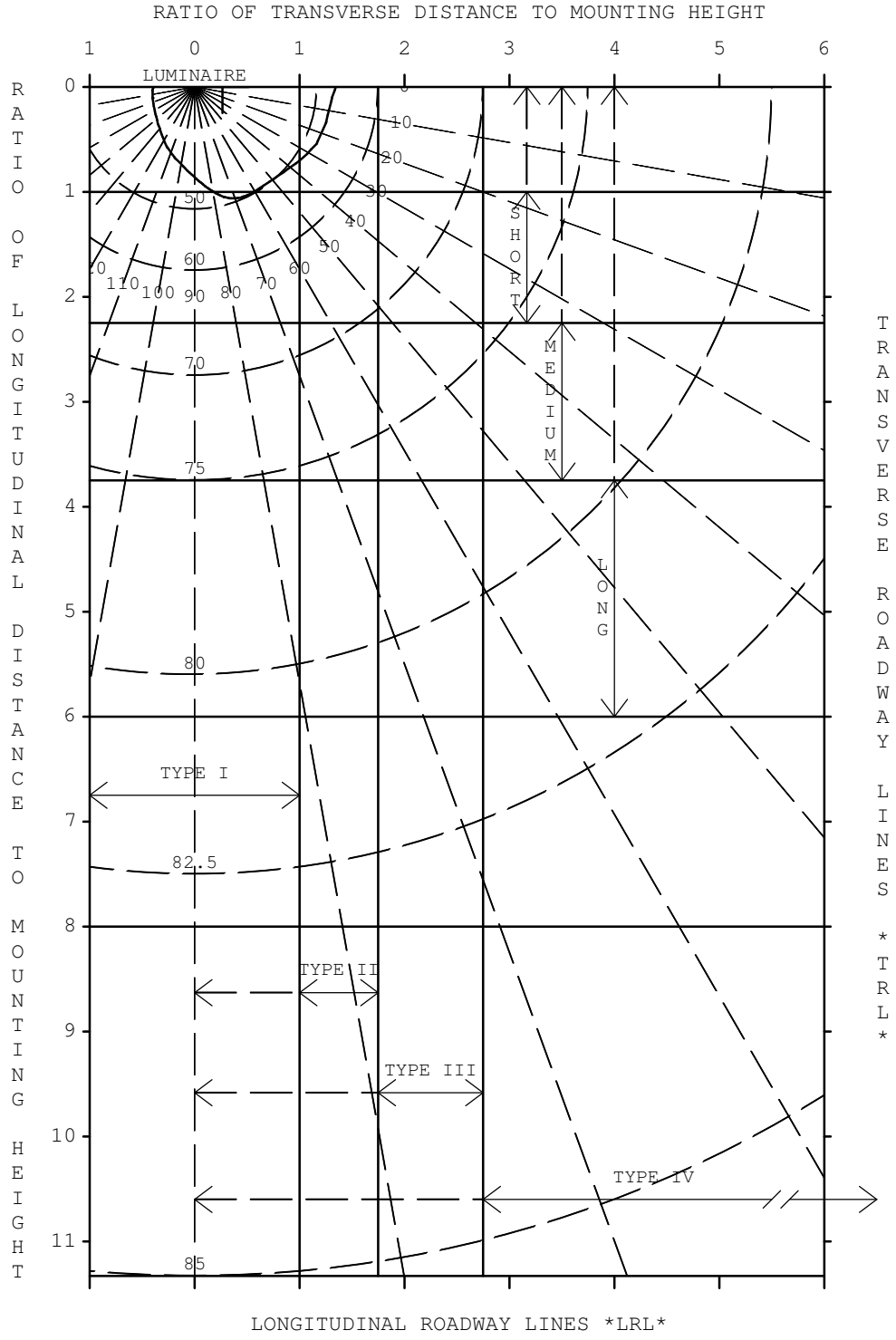
TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST
LUMINOUS OPENING OF LUMINAIRE.

LIGHTING SCIENCES, INC.

7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

CERTIFIED TEST REPORT NO.27936

ENLUX LIGHTING - 6K OUTDOOR AREA LIGHT,CAT# 6K-12-III
WITH SILVER INTERIOR AND NO LENS
SEVENTY TWO LEDS. LUMINAIRE OUTPUT: 7289 Lms.
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NOTE:
CONTOUR LINE
IS FOR 50%
OF THE MAXIMUM
INTENSITY

IES ROADWAY CLASSIFICATION: TYPE II, VERY SHORT

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*** THIS IS AN ABSOLUTE TEST REPORT ***

UTILIZATION TABLE

CO-EFFICIENT OF UTILIZATION

RATIO	HOUSE SIDE	STREET SIDE	TOTAL
0.5	0.229	0.319	0.548
1.0	0.300	0.508	0.808
1.5	0.322	0.588	0.910
2.0	0.331	0.622	0.953
2.5	0.335	0.637	0.972
3.0	0.336	0.645	0.981
3.5	0.337	0.650	0.987
4.0	0.338	0.653	0.990
5.0	0.338	0.657	0.995
TOTAL:	0.338	0.662	1.000

PERCENTAGE OUTPUTS

DOWNWARD:	STREET SIDE =	66.2%
	HOUSE SIDE =	33.8%
	TOTAL =	100.0%
UPWARD:	STREET SIDE =	0.0%
	HOUSE SIDE =	0.0%
	TOTAL =	0.0%

EFFICACY (LUMENS PER WATT) 64.6

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS
BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.
LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD
THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

LIGHTING SCIENCES, INC.
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ZONAL LUMEN SUMMARY PER IES PUBLICATION TM-15-07

*** THIS IS AN ABSOLUTE TEST REPORT ***

FORWARD LIGHT:

LUMENS	4821.9
% LUMENS	66.2 %
FORWARD LOW ZONE (0 TO 30 DEGREES)	20.8 %
FORWARD MID ZONE (30 TO 60 DEGREES)	35.5 %
FORWARD HIGH ZONE (60 TO 80 DEGREES)	9.5 %
FORWARD VERY HIGH ZONE (80 TO 90 DEGREES)	0.4 %

BACK LIGHT:

LUMENS	2467.3
% LUMENS	33.8 %
BACK LIGHT LOW ZONE (0 TO 30 DEGREES)	14.4 %
BACK LIGHT MID ZONE (30 TO 60 DEGREES)	16.3 %
BACK LIGHT HIGH ZONE (60 TO 80 DEGREES)	3.0 %
BACK LIGHT VERY HIGH ZONE (80 TO 90 DEGREES)	0.0 %

UPLIGHT:

LUMENS	0.0
% LUMENS	0.0 %
UPLIGHT LOW ZONE (90 TO 100 DEGREES)	0.0 %
UPLIGHT HIGH ZONE (100 TO 180 DEGREES)	0.0 %

TRAPPED LIGHT: NOT APPLICABLE TO AN ABSOLUTE TEST

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IES "BUG" RATING (BACK LIGHT, UPLIGHT, GLARE)
PER ADDENDUM TO IES TM-15-07

	LUMENS	SECONDARY SOLID ANGLE RATING
BACK LIGHT		
BH (60-80 DEGREES)	219.9	B1
BM (30-60 DEGREES)	1191.5	B2
BL (0-30 DEGREES)	1053.3	B3
UPLIGHT		
UH (100-180 DEGREES)	0.0	U0
UL (90-100 DEGREES)	0.0	U0
FVH (80-90 DEGREES)	29.2	U1
BVH (80-90 DEGREES)	2.6	U0
GLARE LIGHT		
FVH (80-90 DEGREES)	29.2	G1
BVH (80-90 DEGREES)	2.6	G0
FH (60-80 DEGREES)	689.8	G1
BH (60-80 DEGREES)	219.9	G1

IES BUG RATING: B3 U1 G1

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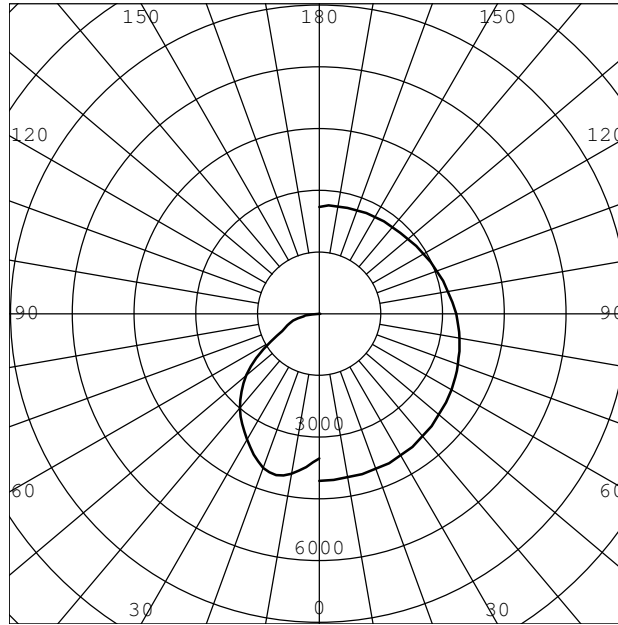
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LUMINAIRE OPERATING AT 120 VAC AND 112.8 WATTS

INTENSITY (CANDLEPOWER)
IN MAX. PLANE

INTENSITY (CANDLEPOWER)
IN MAX. CONE

ANGLE	CANDLEPOWER
0.0	3519
5.0	3741
10.0	3953
15.0	4057
20.0	3988
25.0	3777
30.0	3525
35.0	3273
40.0	3014
45.0	2688
50.0	2319
52.5	2112
55.0	1877
57.5	1620
60.0	1371
62.5	1160
65.0	1003
67.5	909
70.0	833
72.5	760
75.0	663
77.5	538
80.0	394
82.5	352
85.0	194
87.5	20
90.0	0
95.0	0
105.0	0
115.0	0
125.0	0
135.0	0
145.0	0
155.0	0
165.0	0
175.0	0
180.0	0



ANGLE	CANDLEPOWER
0.0	4057
5.0	4050
15.0	4036
25.0	4016
35.0	3960
45.0	3869
55.0	3766
60.0	3710
62.5	3679
65.0	3647
67.5	3625
70.0	3588
72.5	3552
75.0	3528
77.5	3491
80.0	3458
82.5	3429
85.0	3388
87.5	3357
90.0	3327
95.0	3255
105.0	3121
115.0	2995
125.0	2880
135.0	2796
145.0	2746
155.0	2706
165.0	2671
175.0	2651
180.0	2596

MAXIMUM INTENSITY (CANDLEPOWER) : 4057 CD
 PLANE OF MAXIMUM: 0.0
 VERTICAL ANGLE OF MAXIMUM: 15.0

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INTENSITY (CANDLEPOWER) SUMMARY

VERT. ANGLE	HORIZONTAL ANGLES - STREET SIDE										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	

0.0	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519
5.0	3741	3761	3757	3733	3709	3659	3626	3598	3561	3521	
10.0	3953	3968	3953	3927	3884	3810	3740	3663	3576	3482	
15.0**	4057	4050	4036	4016	3960	3869	3766	3647	3528	3388	
20.0	3988	3964	3956	3953	3892	3788	3663	3531	3369	3194	
25.0	3777	3747	3759	3774	3719	3615	3472	3306	3093	2879	
30.0	3525	3513	3513	3525	3470	3352	3177	2973	2773	2591	
35.0	3273	3262	3255	3250	3160	3009	2822	2699	2565	2380	
40.0	3014	2988	2973	2925	2792	2608	2510	2474	2355	2158	
45.0	2688	2661	2652	2592	2422	2287	2247	2232	2141	1942	
50.0	2319	2268	2240	2189	2071	1999	1971	1970	1897	1722	
55.0	1877	1809	1807	1813	1771	1729	1709	1716	1630	1444	
60.0	1371	1329	1407	1475	1467	1461	1459	1414	1307	1097	
65.0	1003	997	1049	1131	1181	1190	1118	957	750	572	
70.0	833	815	781	786	823	732	560	450	328	276	
75.0	663	641	562	562	414	325	258	202	167	147	
80.0	394	393	416	271	178	118	68	30	11	6	
85.0	194	182	108	40	0	0	0	0	0	0	
90.0	0	0	0	0	0	0	0	0	0	0	

VERT. ANGLE	HORIZONTAL ANGLES - HOUSE SIDE										
	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
0.0	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519	3519
5.0	3505	3477	3430	3385	3343	3314	3305	3295	3290	3286	3245
10.0	3443	3390	3294	3207	3127	3074	3048	3028	3017	3005	2957
15.0**	3327	3255	3121	2995	2880	2796	2746	2706	2671	2651	2596
20.0	3103	3024	2871	2728	2590	2477	2388	2317	2255	2222	2156
25.0	2778	2702	2541	2408	2265	2125	1991	1885	1807	1745	1679
30.0	2499	2428	2271	2137	1970	1802	1635	1478	1360	1279	1229
35.0	2286	2208	2045	1883	1699	1508	1302	1122	1024	969	940
40.0	2061	1972	1793	1617	1428	1221	1004	871	828	813	796
45.0	1834	1736	1554	1374	1171	947	788	722	695	671	654
50.0	1615	1503	1291	1078	855	691	622	598	575	551	541
55.0	1336	1221	1001	793	608	522	477	439	437	454	441
60.0	996	912	729	556	460	410	352	324	326	314	309
65.0	500	461	411	386	361	325	277	248	220	198	195
70.0	266	256	234	219	223	234	211	164	139	114	111
75.0	140	131	117	114	123	112	95	94	75	66	59
80.0	5	5	7	21	30	32	23	32	36	25	22
85.0	0	0	0	0	0	0	0	2	6	2	1
90.0	0	0	0	0	0	0	0	0	0	0	0

** DENOTES VERTICAL ANGLE OF MAXIMUM CONE

**** DENOTES LATERAL ANGLE OF MAXIMUM PLANE

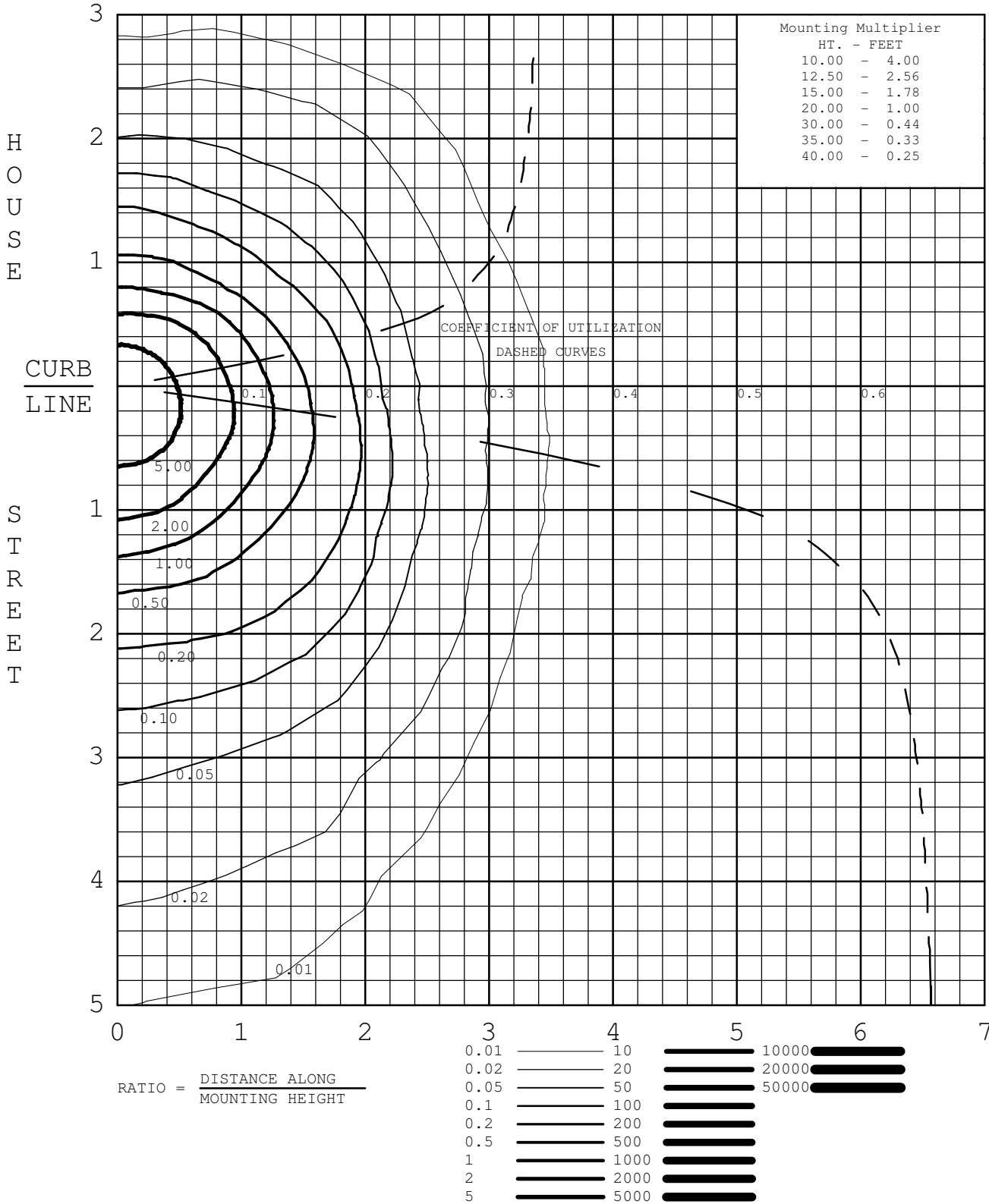
INTENSITY WAS MEASURED IN 2.5 DEGREE STEPS - TABULATIONS ARE AVAILABLE

ISOFOOTCANDLE

CERTIFIED TEST REPORT NO.27936

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 WITH SILVER INTERIOR AND NO LENS
 SEVENTY TWO LEDS. LUMINAIRE OUTPUT: 7289 Lms.
 LUMINAIRE OPERATING AT 120 VAC AND 112.8 WATTS

MOUNTING HEIGHT FOR ISOFC 20.0 FEET



LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
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INDEPENDENT TEST LABORATORY REPORT No. 27936

** ILLUMINANCE(FOOTCANDLE) TABLE FOR SINGLE LUMINAIRE AT 20.0 FT. **															
LATERAL RATIOS															
-3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.008	.008	.008	.007	.005	.004	.003	.002	.001	.001	.000	.000	.000	.000	
-2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.017	.018	.017	.015	.010	.007	.004	.002	.001	.001	.000	.000	.000	.000	
-2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.050	.049	.040	.031	.021	.011	.006	.004	.002	.001	.000	.000	.000	.000	
-1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	0.17	0.14	.095	.064	.034	.017	.008	.005	.003	.001	.001	.000	.000	.000	
-1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	0.57	0.48	0.25	0.13	.059	.025	.012	.006	.003	.001	.001	.000	.000	.000	
-0.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	2.7	2.0	0.85	0.30	.098	.035	.016	.007	.004	.002	.001	.000	.000	.000	
HOUSE		CURB LINE													
STREET	8.8	4.7	1.6	0.53	0.14	.044	.018	.009	.004	.002	.001	.000	.000	.000	
0.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	6.6	4.0	1.5	0.57	0.17	.046	.019	.009	.004	.002	.001	.000	.000	.000	
1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	2.3	1.7	0.83	0.39	0.14	.046	.018	.009	.004	.002	.001	.000	.000	.000	
1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	0.74	0.61	0.40	0.23	0.10	.037	.016	.008	.004	.002	.001	.000	.000	.000	
2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	0.24	0.22	0.18	0.12	.063	.027	.013	.007	.003	.002	.001	.000	.000	.000	
2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	0.11	0.10	.085	.063	.038	.019	.010	.005	.003	.001	.001	.000	.000	.000	
3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.062	.056	.045	.036	.023	.013	.008	.004	.002	.001	.001	.000	.000	.000	
3.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.036	.033	.027	.022	.015	.009	.006	.003	.002	.001	.001	.000	.000	.000	
4.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.022	.020	.017	.015	.011	.007	.004	.003	.002	.001	.000	.000	.000	.000	
4.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.014	.013	.012	.010	.007	.005	.003	.002	.001	.001	.000	.000	.000	.000	
5.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.009	.008	.008	.007	.005	.004	.002	.002	.001	.001	.000	.000	.000	.000	
	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
	LONGITUDINAL MOUNTING HEIGHT RATIOS														

CORRECTION FACTORS FOR OTHER MOUNTING HEIGHTS: SEE ISOFOOTCANDLE PAGE

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WITH SILVER INTERIOR AND NO LENS
SEVENTY TWO LEDS. LUMINAIRE OUTPUT: 7289 Lms.
LUMINAIRE OPERATING AT 120 VAC AND 112.8 WATTS

ELECTRICAL MEASUREMENTS

INPUT VOLTAGE:	120.0	VOLTS AC
INPUT CURRENT:	1.463	AMPS
INPUT POWER:	112.8	WATTS
POWER FACTOR:	64.3	PERCENT
TOTAL HARMONIC DISTORTION:	44.11	PERCENT
OFF STATE POWER:	0.00	WATTS

LIGHT OUTPUT

LUMENS:	7289	lm
EFFICACY:	64.6	lm/W

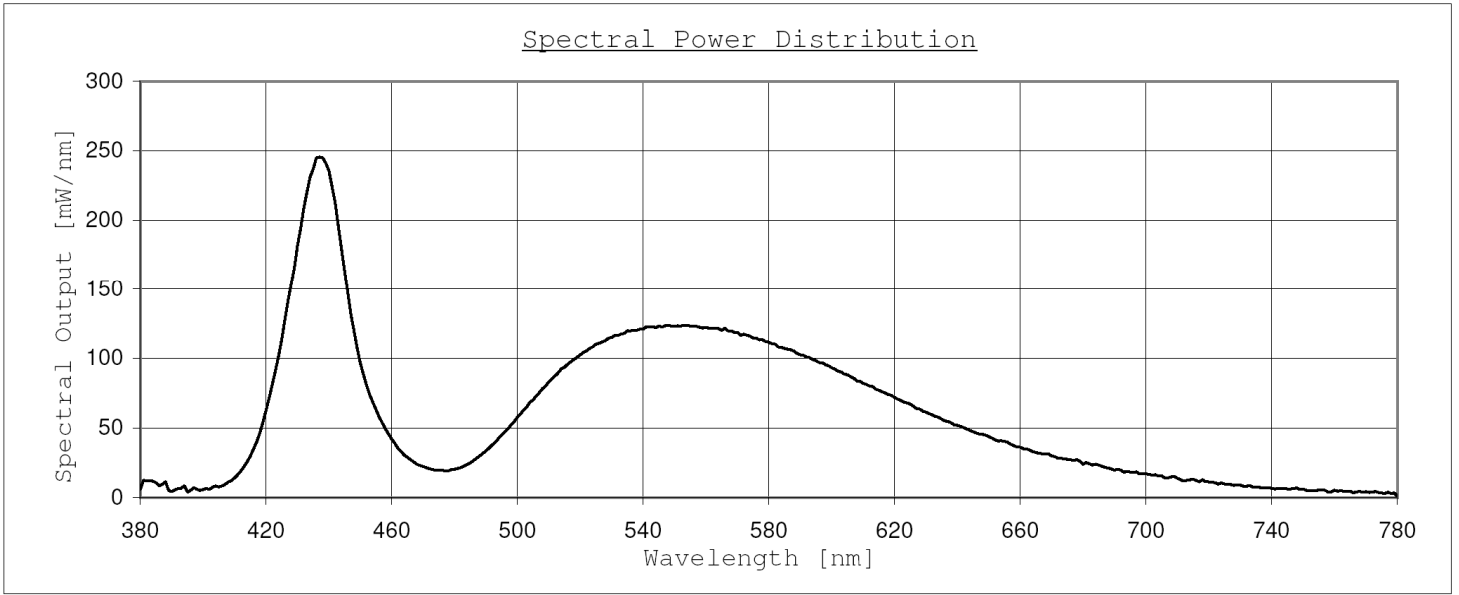
SPECTRAL MEASUREMENTS

X:	0.3224	
y:	0.3411	
u/u':	0.2000	
v:	0.3174	
v':	0.4761	
Duv:	0.0047	
CRI (R _a):	68.8	
CRI (R _g):	-23.7	
CCT:	5952	K
RADIANT FLUX:	23727	mW

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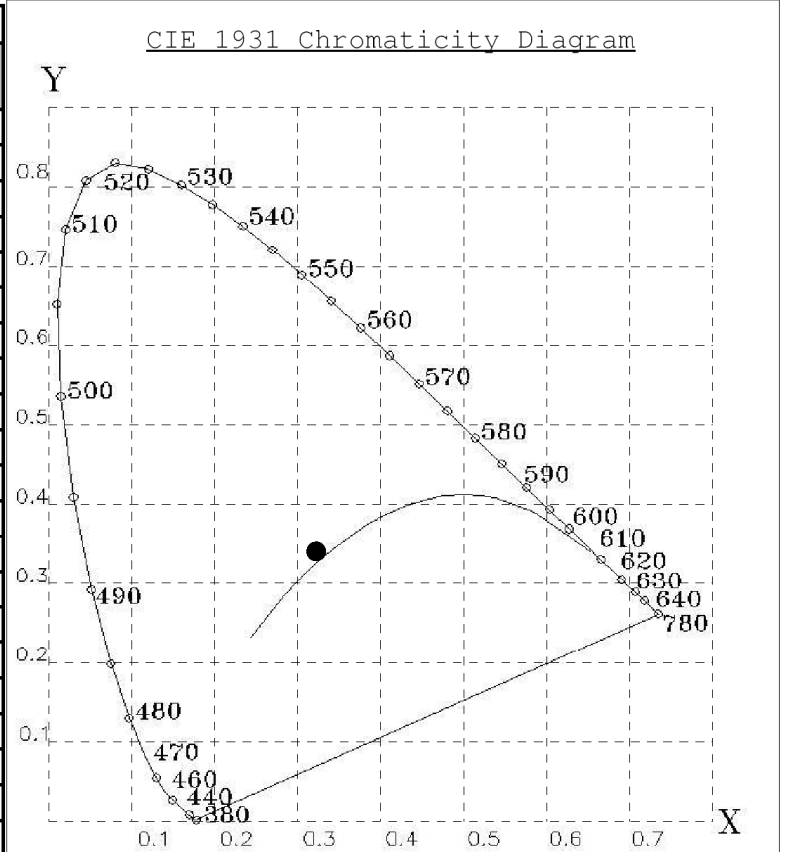
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Tabulated Spectral Power Distribution

Wavelength [nm]	[mW/nm]	Wavelength [nm]	[mW/nm]
380	5.88087	590	102.52964
390	4.29014	600	93.15743
400	5.77069	610	82.08431
410	14.12373	620	71.94772
420	62.77521	630	61.37042
430	181.78369	640	51.86048
440	235.89598	650	43.79666
450	96.55924	660	36.23554
460	42.00623	670	29.81754
470	22.31151	680	23.87469
480	20.37647	690	19.72227
490	33.56367	700	17.09172
500	57.78267	710	13.85517
510	83.23432	720	11.30037
520	102.55718	730	8.93149
530	114.95246	740	6.66591
540	120.83334	750	6.17698
550	122.87167	760	5.34374
560	122.28634	770	4.24883
570	118.58153	780	1.16378
580	111.51622		



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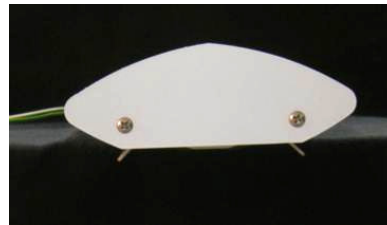
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LUMINOUS OPENING



END VIEW



SIDE VIEW



All testing was conducted in accordance with LM-79-08,

Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products as published by the Illuminating Engineering Society of North America (IESNA).

The condition of the item tested was new. Stabilization time before testing exceeded 16 hours.

The test results (luminous distribution and flux) were obtained by using a Lighting Sciences series 6000 Type C Moving Mirror Goniophotometer

- The photometric reference standard used is a set of three incandescent luminous intensity standard lamps calibrated and traceable to the U.S. National Institute of Standards and Technology.

The test results (colorimetric and luminous flux) were obtained by using a Lighting Sciences model 4000 Integrating Sphere of either 1 or 2 meters diameter, having an internal reflectance exceeding 0.80. 4π geometry was used. Correction factors were applied for spectral mismatch and self-absorption. The spectroradiometer employed was a LSC model 500E having a bandwidth of .84.

- The photometric reference standard used is a set of three incandescent luminous flux standard lamps calibrated and traceable to the U.S. National Institute of Standards and Technology.
- The colorimetric reference standard used is an incandescent spectral standard lamp calibrated and traceable to the U.S. National Institute of Standards and Technology.

Power measurements were obtained with a Yokogawa WT210 power analyzer.

Ambient temperature during testing was $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured using an Omega model DP460.

Calibration certificates are on file at the laboratories of Lighting Sciences Inc.