

REPORT NUMBER: ITL87843-GONIOPHOTOMETRY

ISSUE DATE: 07/21/16

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 36S 0 X 2ES 7 XX 4 XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY PAINTED INTERIOR FINISH, 1 WHITE CIRCUIT BOARD WITH 36 LEDS, 1 CLEAR PLASTIC LENS WITH 1 OPTIC PER LED, CLEAR FLAT GLASS LENS IN CAST GRAY PAINTED METAL DOOR FRAME.

LAMPS: THIRTY-SIX WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.

INPUT ELECTRICAL: 120.0 VOLTS, 75.5 WATTS, 0.634 AMPS

LED DRIVER: LED ROADWAY LIGHTING J100UNV2, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, OUTPUT CURRENT ROTARY SWITCH SET TO 700mA. LRL65633-LF SURGE PROTECTOR.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVER AND SURGE PROTECTOR. SURGE PROTECTOR INFORMATION PROVIDED BY CLIENT.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

TOTAL LUMEN OUTPUT: 8026

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL87843-SPHERE: 3158K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL87843-SPHERE: 71

LED DC DRIVE CURRENT (mA): 700 (PROVIDED BY CLIENT)

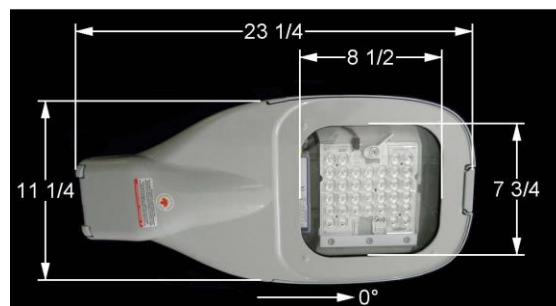
POWER FACTOR: 99.2 %

BUG RATING: B2 U0 G2

LUMINAIRE EFFICACY: 106.3 lm/W

IES CLASSIFICATION: Medium, Type II

**CUTOFF DESIGNATION IS NOT INTENDED TO BE USED WITH ABSOLUTE PHOTOMETRIC TESTS.

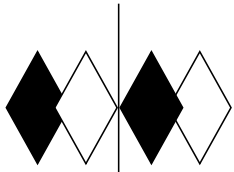


FLUX DISTRIBUTION

LUMENS	DOWNWARD	UPWARD	TOTALS
HOUSE SIDE	2632	0	2632
STREET SIDE	5394	0	5394
TOTALS	8026	0	8026

TESTING WAS PERFORMED IN ACCORDANCE WITH IESNA LM-79-08
TEST ANGULAR INCREMENTS AND REPORT FORMATTING WAS BASED ON IESNA LM-31-95

THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.



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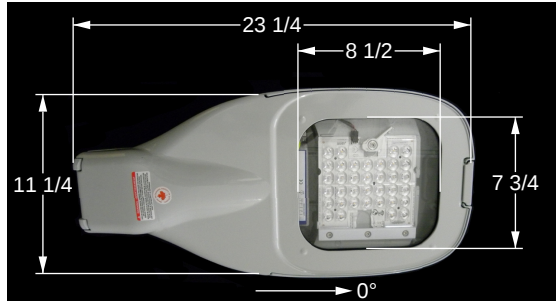
NVLAP
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.

4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 30 foot mounting height.



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CATALOG NUMBER: NXT 36S 0 X 2ES 7 XX 4 XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY PAINTED INTERIOR FINISH, 1 WHITE CIRCUIT BOARD WITH 36 LEDS, 1 CLEAR PLASTIC LENS WITH 1 OPTIC PER LED, CLEAR FLAT GLASS LENS IN CAST GRAY PAINTED METAL DOOR FRAME.

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TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

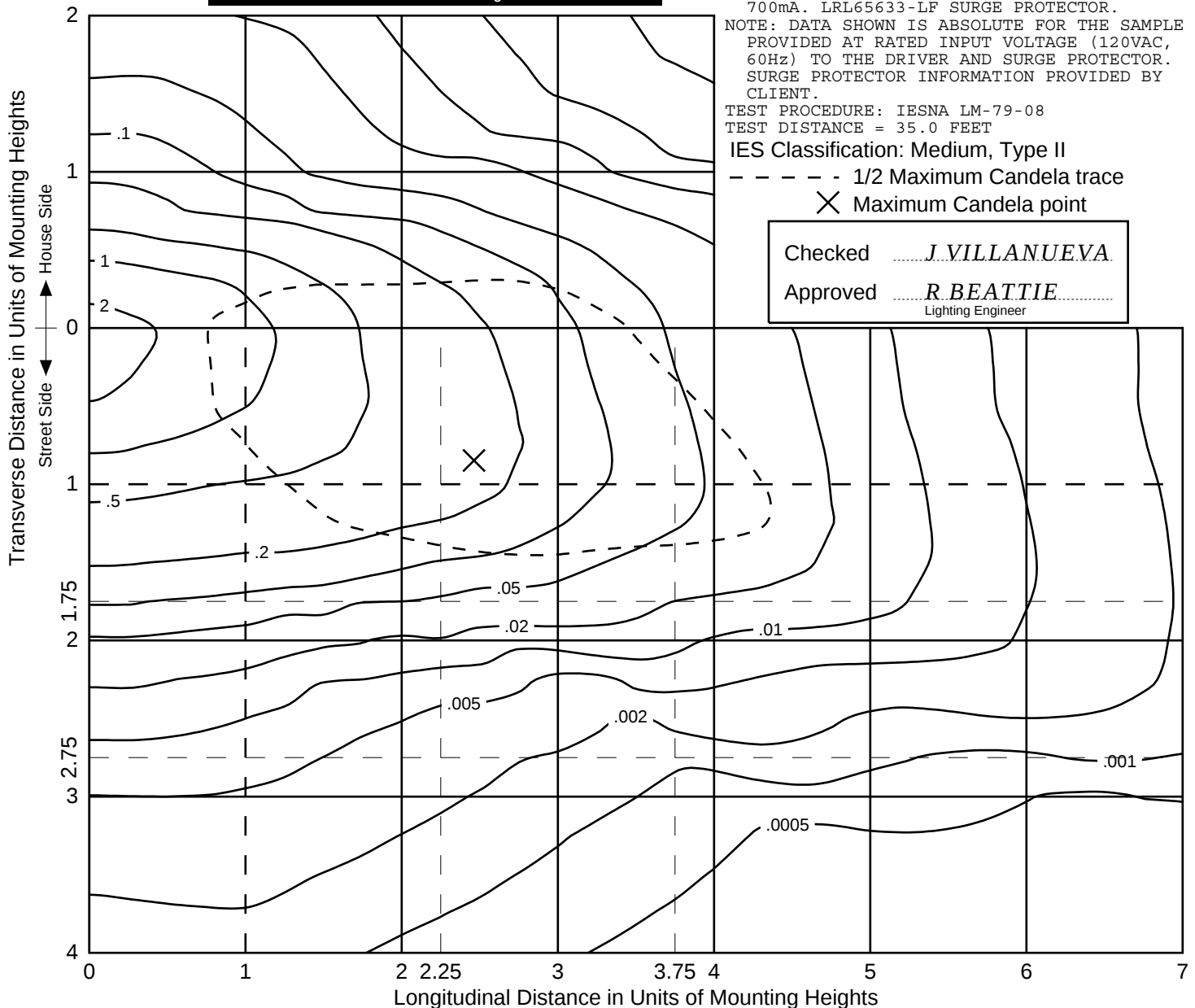
IES Classification: Medium, Type II

--- 1/2 Maximum Candela trace

X Maximum Candela point

CheckedJ.VILLANUEVA.....

ApprovedR.BEATTIE.....
Lighting Engineer



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CATALOG NUMBER: NXT 36S 0 X 2ES 7 XX 4
XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY
PAINTED INTERIOR FINISH, 1 WHITE
CIRCUIT BOARD WITH 36 LEDS, 1 CLEAR
PLASTIC LENS WITH 1 OPTIC PER LED,
CLEAR FLAT GLASS LENS IN CAST GRAY
PAINTED METAL DOOR FRAME.

LAMPS: THIRTY-SIX WHITE LIGHT EMITTING
DIODES (LEDs), VERTICAL BASE-UP
POSITION.

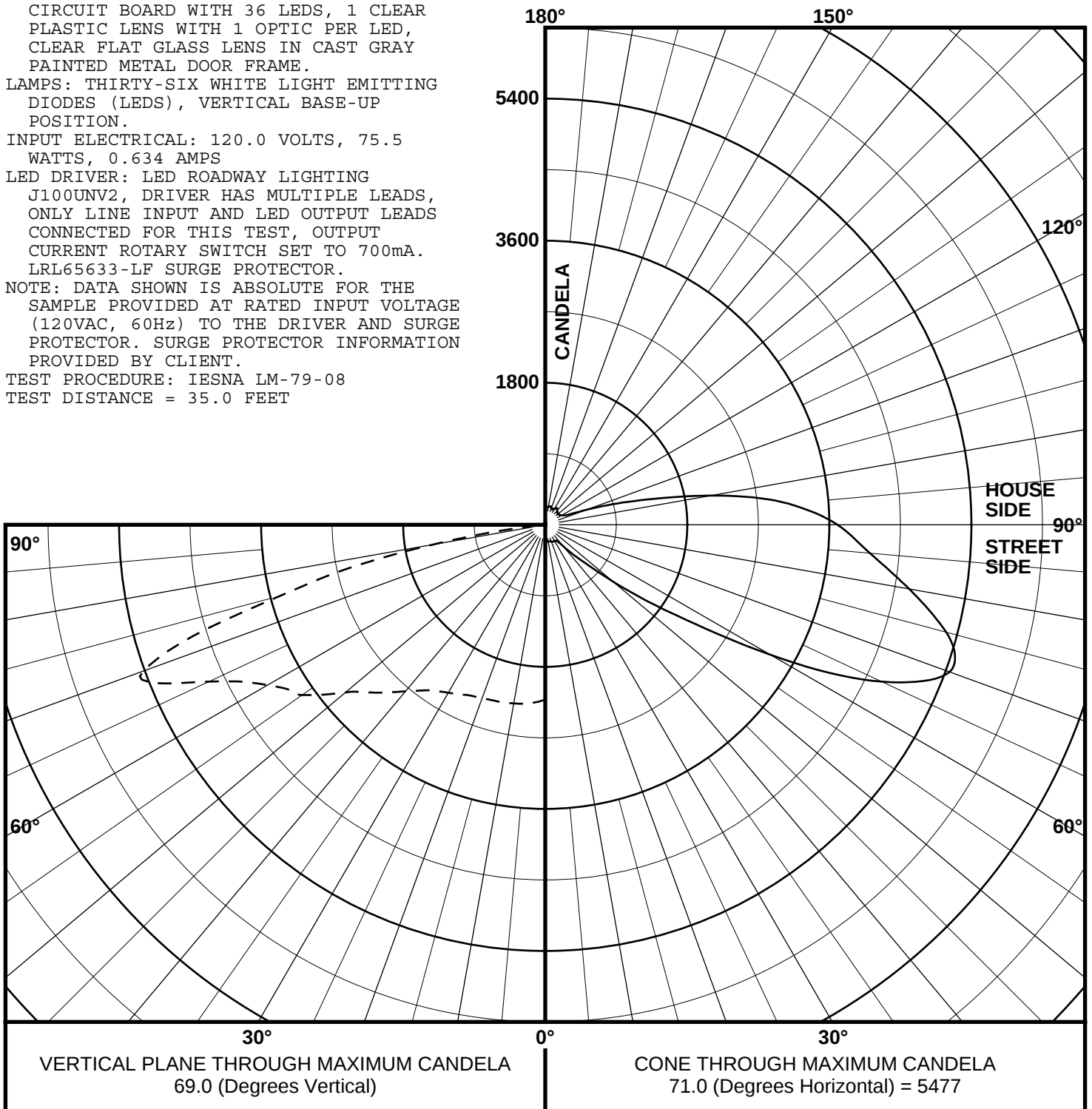
INPUT ELECTRICAL: 120.0 VOLTS, 75.5
WATTS, 0.634 AMPS

LED DRIVER: LED ROADWAY LIGHTING
J100UNV2, DRIVER HAS MULTIPLE LEADS,
ONLY LINE INPUT AND LED OUTPUT LEADS
CONNECTED FOR THIS TEST, OUTPUT
CURRENT ROTARY SWITCH SET TO 700mA.
LRL65633-LF SURGE PROTECTOR.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE
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(120VAC, 60Hz) TO THE DRIVER AND SURGE
PROTECTOR. SURGE PROTECTOR INFORMATION
PROVIDED BY CLIENT.

TEST PROCEDURE: IESNA LM-79-08
TEST DISTANCE = 35.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

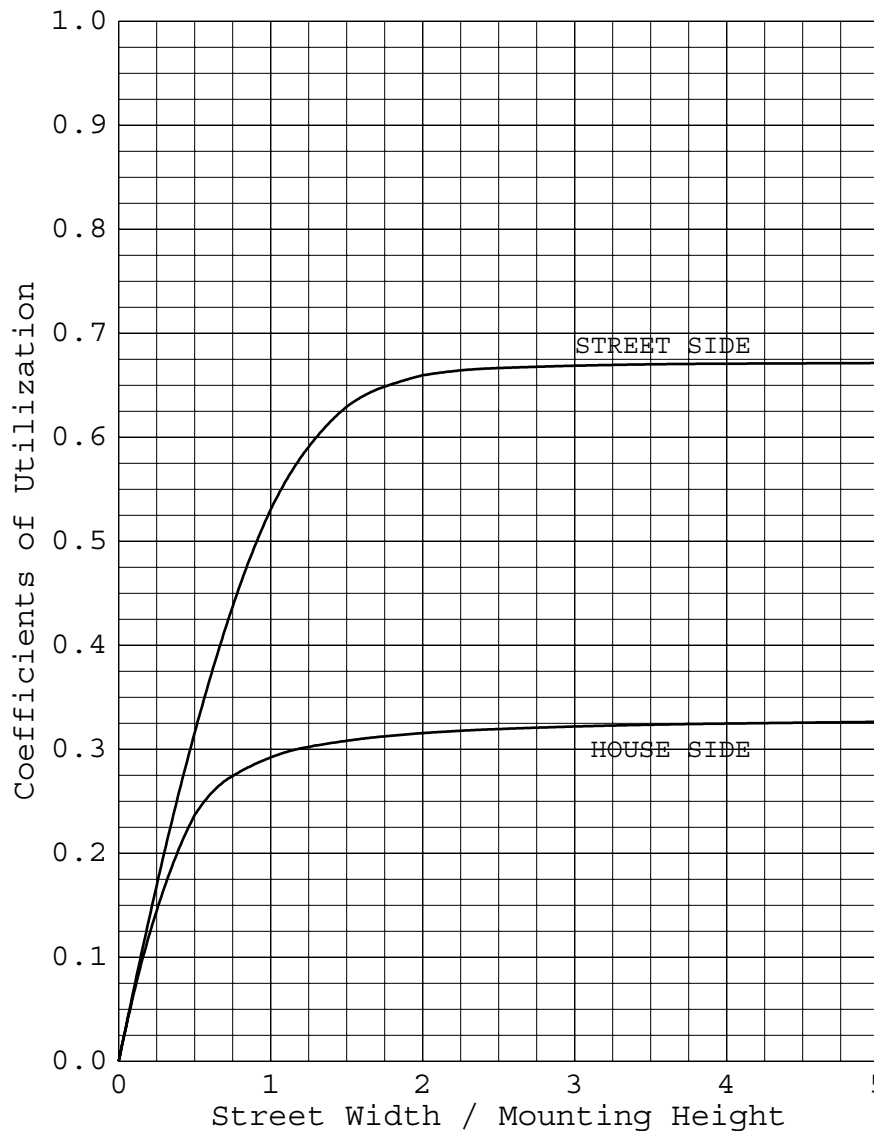




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PAGE: 4 OF 9

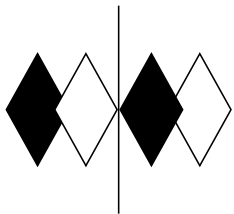
COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	5394	67.2
DOWNWARD HOUSE SIDE	2632	32.8
DOWNWARD TOTAL	8026	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	8026	100.0

EFFICACY = 106.3 lm/W

ALL CANDELA AND LUMENS IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY.
THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE
LUMEN OUTPUT OF THIS LUMINAIRE SAMPLE.



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PAGE: 5 OF 9

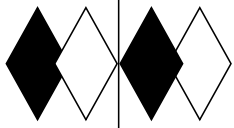
FLUX DISTRIBUTION BY SOLID ANGLE

(PER IESNA TM-15-11, LUMINAIRE CLASSIFICATION
SYSTEM FOR OUTDOOR LUMINAIRES)

	LUMENS	PERCENT OF FIXTURE	BUG ZONE RATINGS
FORWARD LIGHT	5394.	67.2	
FL (0- 30)	984.1	12.3	
FM (30- 60)	2721.1	33.9	
FH (60- 80)	1643.2	20.5	G1
FVH(80- 90)	45.8	0.6	G1
BACK LIGHT	2632.	32.8	
BL (0- 30)	714.2	8.9	B2
BM (30- 60)	1302.7	16.2	B2
BH (60- 80)	593.4	7.4	B2 G2
BVH(80- 90)	21.9	0.3	G1
UPLIGHT	0.	0.0	
UL (90-100)	0.0	0.0	U0
UH (100-180)	0.0	0.0	U0
TRAPPED LIGHT	0.	0.0	
TOTAL FLUX	8026.	100.0	

BACKLIGHT, UPLIGHT, AND GLARE (BUG) RATINGS
(PER ADDENDUM A FOR IESNA TM-15-11)

BUG RATING: B2 U0 G2



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PAGE: 6 OF 9

CANDELA TABULATION

	STREET SIDE										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	71.0	75.0	85.0
	180.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	175.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	165.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	155.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	145.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	135.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	125.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	115.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	105.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	95.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	92.5	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	87.5	2.	2.	2.	2.	3.	3.	4.	4.	5.	5.
	85.0	6.	7.	9.	8.	9.	10.	11.	17.	55.	41.
V	82.5	23.	23.	32.	30.	24.	29.	29.	87.	540.	309.
E	80.0	45.	49.	67.	50.	46.	58.	60.	285.	1462.	999.
R	77.5	74.	77.	97.	73.	80.	86.	116.	876.	2566.	1994.
T	75.0	89.	95.	115.	111.	115.	130.	220.	2014.	3472.	2753.
I	72.5	121.	125.	146.	153.	156.	213.	686.	3358.	4665.	3466.
C	70.0	171.	176.	190.	210.	212.	433.	1597.	4436.	5420.	4021.
A	69.0<<	206.	211.	218.	235.	243.	617.	1943.	4705.	5477.	4130.
L	67.5	246.	252.	257.	281.	331.	996.	2423.	4822.	5253.	4189.
	65.0	325.	339.	352.	441.	728.	1689.	3001.	4463.	4700.	3988.
A	62.5	514.	540.	595.	800.	1217.	2130.	3110.	4111.	4312.	3787.
N	60.0	806.	830.	899.	1130.	1481.	2213.	3014.	3923.	4062.	3686.
G	57.5	1039.	1054.	1105.	1286.	1589.	2234.	2976.	3782.	3875.	3606.
L	55.0	1178.	1185.	1233.	1383.	1687.	2233.	2950.	3688.	3763.	3537.
E	52.5	1290.	1293.	1335.	1488.	1776.	2211.	2871.	3457.	3534.	3451.
	50.0	1384.	1387.	1437.	1591.	1852.	2231.	2800.	3229.	3305.	3331.
	47.5	1478.	1486.	1544.	1684.	1920.	2268.	2739.	3082.	3137.	3205.
	45.0	1572.	1579.	1641.	1765.	1972.	2299.	2660.	2939.	3008.	3098.
	42.5	1659.	1664.	1728.	1849.	2046.	2337.	2630.	2819.	2877.	2995.
	40.0	1761.	1764.	1833.	1961.	2144.	2373.	2594.	2698.	2756.	2877.
	37.5	1891.	1910.	1979.	2087.	2245.	2419.	2553.	2593.	2650.	2772.
	35.0	2053.	2073.	2143.	2235.	2333.	2446.	2470.	2499.	2562.	2670.
	30.0	2386.	2400.	2421.	2433.	2434.	2391.	2330.	2387.	2457.	2508.
	25.0	2476.	2490.	2487.	2463.	2344.	2260.	2261.	2340.	2379.	2382.
	20.0	2317.	2320.	2303.	2278.	2239.	2238.	2291.	2332.	2339.	2290.
	15.0	2229.	2245.	2249.	2260.	2277.	2310.	2339.	2332.	2318.	2249.
	10.0	2313.	2335.	2342.	2357.	2364.	2362.	2344.	2317.	2298.	2237.
	5.0	2316.	2335.	2343.	2338.	2325.	2313.	2302.	2285.	2270.	2229.
	0.0	2217.	2217.	2217.	2217.	2217.	2217.	2217.	2217.	2217.	2217.
									PLANE OF MAXIMUM CANDELA		
									CONE OF MAXIMUM CANDELA		



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PAGE: 7 OF 9

CANDELA TABULATION

	HOUSE SIDE		LATERAL ANGLE								
	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
	180.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	175.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	165.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	155.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	145.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	135.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	125.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	115.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	105.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	95.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	92.5	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	87.5	5.	5.	5.	4.	4.	3.	2.	1.	0.	0.
	85.0	34.	23.	13.	12.	11.	14.	13.	15.	10.	2.
V	82.5	319.	227.	34.	32.	29.	40.	49.	52.	61.	28.
E	80.0	932.	696.	79.	61.	56.	75.	98.	102.	122.	131.
R	77.5	1756.	1321.	181.	102.	93.	111.	141.	165.	204.	224.
T	75.0	2406.	1901.	356.	151.	136.	146.	178.	190.	254.	282.
I	72.5	3107.	2557.	665.	207.	175.	176.	205.	201.	259.	279.
C	70.0	3603.	2999.	1017.	266.	207.	205.	240.	208.	248.	245.
A	69.0<<	3703.	3087.	1161.	284.	219.	218.	254.	216.	241.	224.
L	67.5	3760.	3136.	1339.	310.	239.	236.	269.	231.	239.	211.
	65.0	3653.	3130.	1631.	360.	268.	264.	294.	262.	248.	219.
A	62.5	3579.	3173.	1879.	441.	294.	293.	312.	298.	275.	245.
N	60.0	3557.	3234.	2084.	582.	323.	321.	314.	323.	311.	278.
G	57.5	3538.	3295.	2274.	806.	357.	349.	328.	336.	336.	308.
L	55.0	3496.	3295.	2459.	1059.	401.	377.	350.	348.	359.	335.
E	52.5	3418.	3233.	2462.	1292.	475.	404.	372.	374.	385.	359.
	50.0	3314.	3162.	2490.	1505.	605.	429.	394.	394.	396.	377.
	47.5	3199.	3090.	2507.	1661.	771.	464.	419.	416.	409.	395.
	45.0	3091.	3010.	2494.	1758.	937.	535.	449.	436.	429.	421.
	42.5	2980.	2909.	2467.	1817.	1083.	648.	487.	460.	453.	448.
	40.0	2861.	2800.	2418.	1852.	1206.	763.	559.	490.	471.	463.
	37.5	2747.	2690.	2361.	1872.	1311.	874.	657.	559.	511.	493.
	35.0	2641.	2584.	2302.	1879.	1399.	986.	757.	646.	591.	565.
	30.0	2463.	2402.	2184.	1881.	1549.	1244.	991.	853.	773.	734.
	25.0	2328.	2268.	2098.	1891.	1678.	1472.	1285.	1140.	1043.	996.
	20.0	2238.	2189.	2059.	1922.	1793.	1671.	1543.	1444.	1364.	1340.
	15.0	2205.	2164.	2067.	1975.	1891.	1822.	1755.	1692.	1647.	1640.
	10.0	2203.	2174.	2112.	2042.	1993.	1953.	1915.	1879.	1856.	1865.
	5.0	2212.	2195.	2166.	2136.	2102.	2082.	2059.	2034.	2023.	2042.
	0.0	2217.	2217.	2217.	2217.	2217.	2217.	2217.	2217.	2217.	2217.

CONE OF MAXIMUM CANDELA



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PAGE: 8 OF 9

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	53
5- 10	156
10- 15	250
15- 20	334
20- 25	415
25- 30	490
30- 35	553
35- 40	604
40- 45	654
45- 50	701
50- 55	744
55- 60	767
60- 65	750
65- 70	698
70- 75	520
75- 80	269
80- 85	65
85- 90	3
90- 95	0
95-100	0
100-105	0
105-110	0
110-115	0
115-120	0
120-125	0
125-130	0
130-135	0
135-140	0
140-145	0
145-150	0
150-155	0
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	208
0- 20	793
0- 30	1698
0- 40	2856
0- 50	4211
0- 60	5722
0- 70	7170
0- 80	7959
0- 90	8026
0-100	8026
0-110	8026
0-120	8026
0-130	8026
0-140	8026
0-150	8026
0-160	8026
0-170	8026
0-180	8026



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