

REPORT NUMBER: ITL85763

ISSUE DATE: 10/14/15

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 60M 0 X 2ES 4 XX 3 XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH SEMI-DIFFUSE INTERIOR FINISH, 2 WHITE CIRCUIT BOARDS EACH WITH 36 LEDS, 2 CLEAR PLASTIC LENSES WITH 1 OPTIC PER LED, CLEAR FLAT GLASS LENS IN CAST SEMI-DIFFUSE METAL DOOR FRAME. ONLY 60 LEDS ON FOR THIS TEST.

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

INPUT ELECTRICAL: 120.0 VOLTS, 86.1 WATTS, 0.724 AMPS

LED DRIVER: LED ROADWAY LIGHTING J150UN, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, OUTPUT CURRENT ROTARY SWITCH SET TO 450mA. 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: 10183

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85778: 3757K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85778: 73

LED DC DRIVE CURRENT (mA): 450 (PROVIDED BY CLIENT)

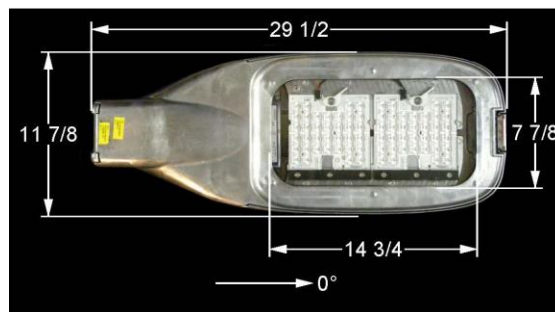
POWER FACTOR: 99.1 %

BUG RATING: B2 U0 G2

LUMINAIRE EFFICACY: 118.3 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	3293	0	3293
STREET SIDE	6890	0	6890
TOTALS	10183	0	10183

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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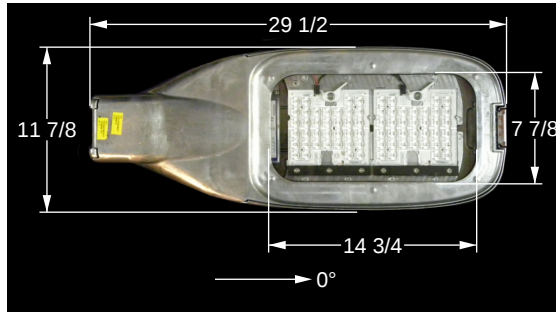
NVLAP
NVLAP LAB CODE: 200925-0

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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PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 60M 0 X 2ES 4 XX 3 XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH SEMI-DIFFUSE INTERIOR FINISH, 2 WHITE CIRCUIT BOARDS EACH WITH 36 LEDS, 2 CLEAR PLASTIC LENSES WITH 1 OPTIC PER LED, CLEAR FLAT GLASS LENS IN CAST SEMI-DIFFUSE METAL DOOR FRAME. ONLY 60 LEDS ON FOR THIS TEST.

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LED DRIVER: LED ROADWAY LIGHTING J150UN, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, OUTPUT CURRENT ROTARY SWITCH SET TO 450mA. LRL65633-LF SURGE PROTECTOR.

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TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

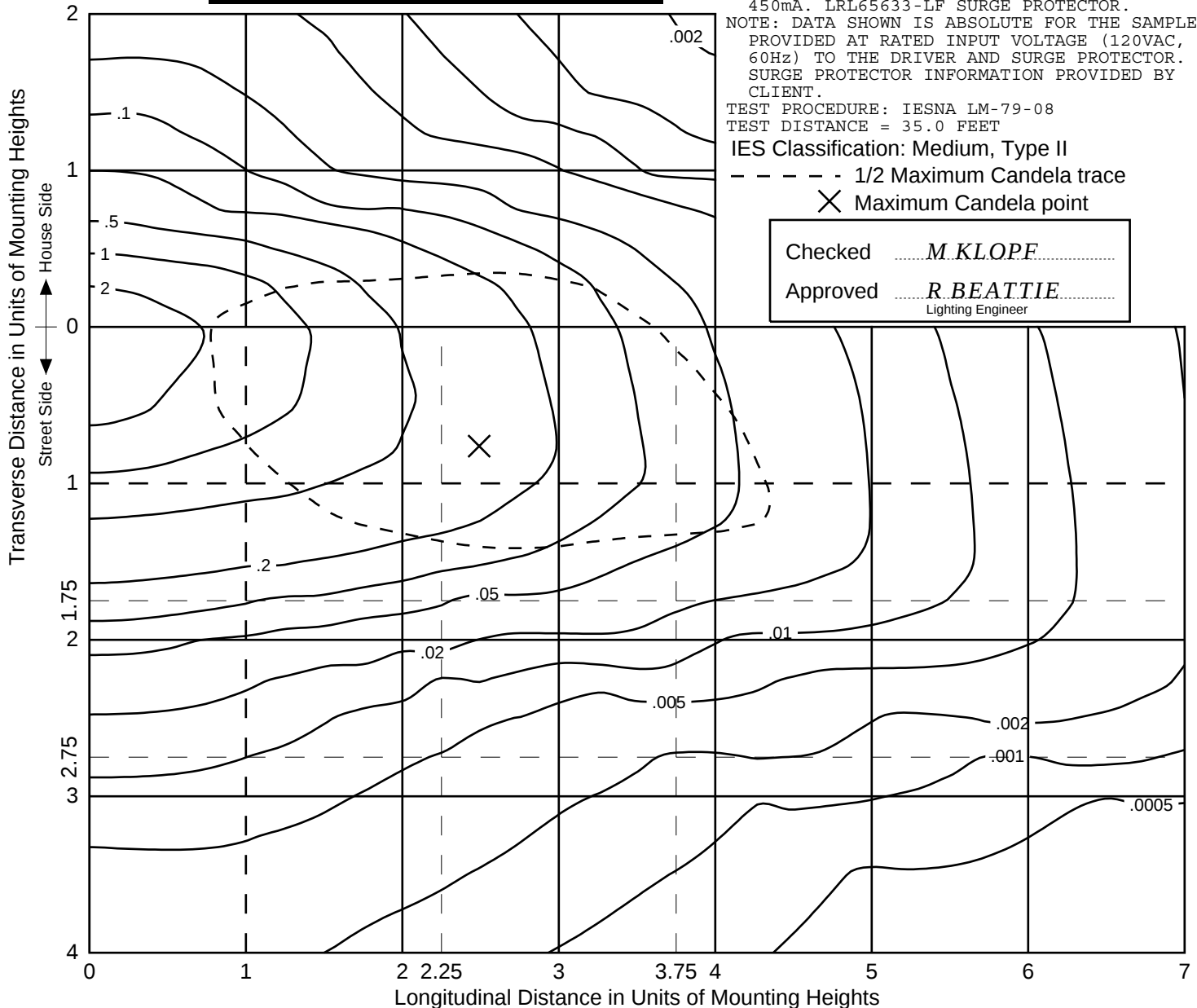
IES Classification: Medium, Type II

--- 1/2 Maximum Candela trace

X Maximum Candela point

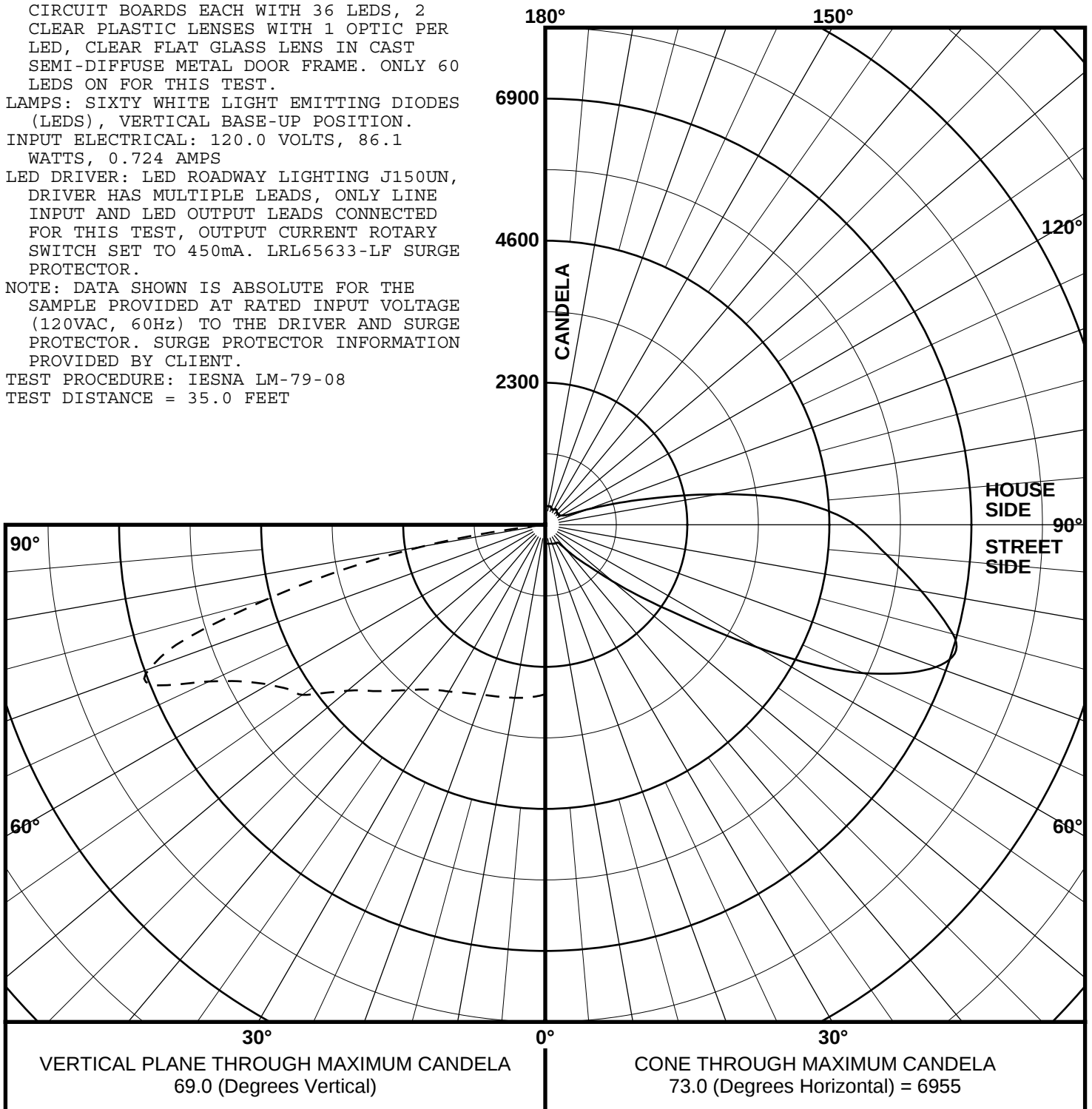
CheckedM.KLOPF.....

ApprovedR.BEATTIE.....
Lighting Engineer



REPORT NUMBER: ITL85763
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PREPARED FOR: LED ROADWAY LIGHTING LTD.
CATALOG NUMBER: NXT 60M 0 X 2ES 4 XX 3
XX X XX X
LUMINAIRE: CAST METAL HOUSING WITH SEMI-DIFFUSE INTERIOR FINISH, 2 WHITE CIRCUIT BOARDS EACH WITH 36 LEDS, 2 CLEAR PLASTIC LENSES WITH 1 OPTIC PER LED, CLEAR FLAT GLASS LENS IN CAST SEMI-DIFFUSE METAL DOOR FRAME. ONLY 60 LEDS ON FOR THIS TEST.
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TEST PROCEDURE: IESNA LM-79-08
TEST DISTANCE = 35.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

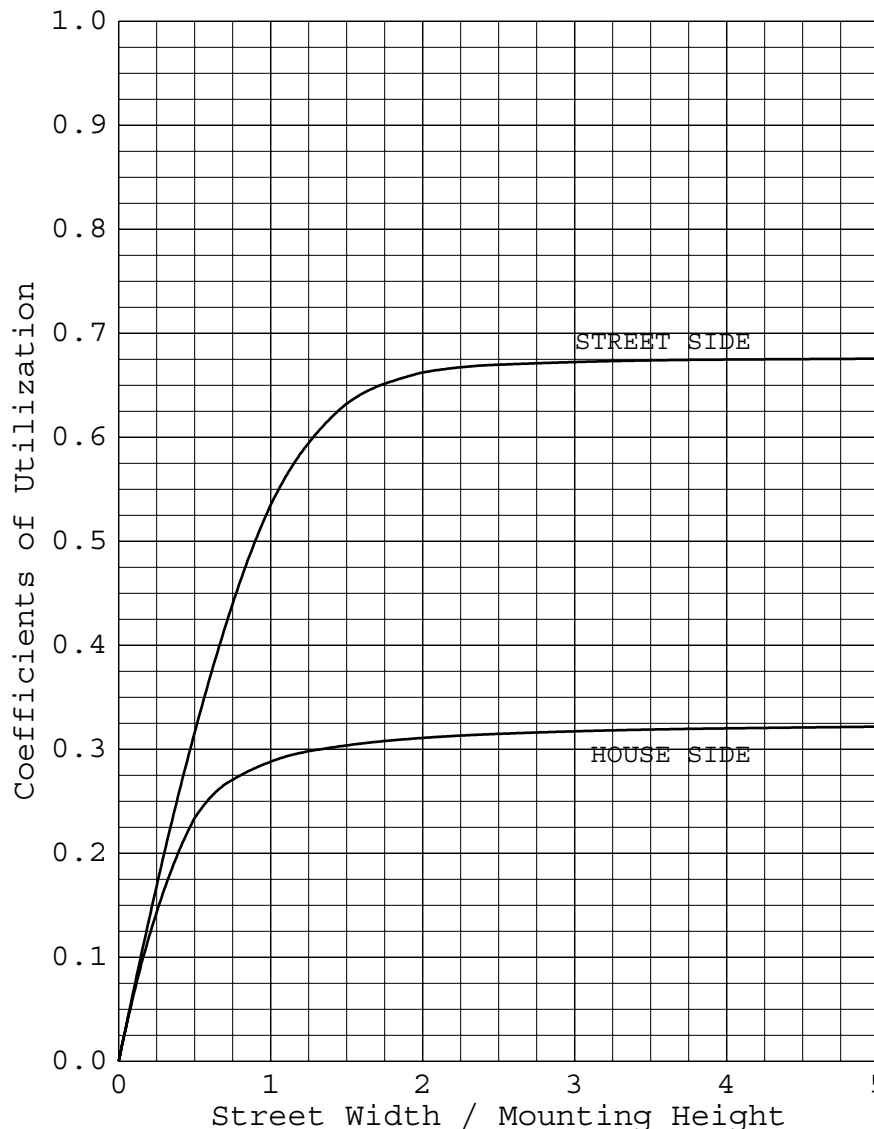




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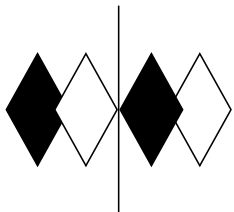
COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	6890	67.7
DOWNWARD HOUSE SIDE	3293	32.3
DOWNWARD TOTAL	10183	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	10183	100.0

EFFICACY = 118.3 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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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	6890.	67.7	
FL (0- 30)	1227.9	12.1	
FM (30- 60)	3492.1	34.3	
FH (60- 80)	2109.6	20.7	G2
FVH(80- 90)	60.4	0.6	G1
BACK LIGHT	3293.	32.3	
BL (0- 30)	873.4	8.6	B2
BM (30- 60)	1613.6	15.8	B2
BH (60- 80)	779.1	7.7	B2 G2
BVH(80- 90)	26.6	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	10183.	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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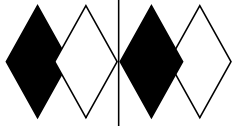
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CANDELA TABULATION

	STREET SIDE										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	73.0	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	4.	3.	4.	3.	2.	2.	2.	4.	6.	6.
	85.0	21.	21.	28.	25.	18.	16.	16.	20.	29.	22.
V	82.5	51.	52.	72.	61.	48.	56.	57.	110.	625.	578.
E	80.0	94.	95.	125.	93.	88.	104.	111.	345.	2004.	1515.
R	77.5	127.	130.	158.	128.	136.	145.	194.	973.	3352.	2830.
T	75.0	152.	157.	182.	180.	183.	207.	352.	2338.	4675.	3789.
I	72.5	201.	207.	227.	235.	236.	324.	895.	3924.	6052.	4726.
C	70.0	274.	276.	289.	304.	306.	622.	1913.	5312.	6815.	5381.
A	69.0<<	305.	307.	319.	337.	351.	850.	2355.	5682.	6955.	5546.
L	67.5	355.	358.	371.	394.	491.	1306.	2955.	5867.	6793.	5624.
	65.0	463.	467.	505.	618.	1002.	2118.	3665.	5576.	6001.	5318.
A	62.5	719.	725.	816.	1048.	1552.	2629.	3854.	5177.	5498.	5002.
N	60.0	1074.	1075.	1174.	1430.	1881.	2772.	3804.	4911.	5175.	4834.
G	57.5	1347.	1342.	1420.	1639.	2028.	2793.	3769.	4750.	4947.	4724.
L	55.0	1531.	1522.	1589.	1785.	2158.	2813.	3715.	4665.	4800.	4598.
E	52.5	1681.	1664.	1721.	1917.	2293.	2845.	3632.	4324.	4467.	4446.
	50.0	1786.	1774.	1847.	2060.	2423.	2903.	3571.	4065.	4180.	4258.
	47.5	1904.	1894.	1981.	2187.	2542.	2970.	3503.	3858.	3973.	4093.
	45.0	2023.	2014.	2118.	2324.	2647.	3018.	3406.	3659.	3809.	3941.
	42.5	2163.	2152.	2277.	2501.	2770.	3064.	3330.	3495.	3644.	3795.
	40.0	2398.	2380.	2513.	2693.	2895.	3116.	3240.	3353.	3495.	3631.
	37.5	2666.	2666.	2753.	2860.	2996.	3135.	3141.	3233.	3364.	3482.
	35.0	2897.	2890.	2938.	2997.	3072.	3087.	3051.	3133.	3257.	3340.
	30.0	3128.	3107.	3120.	3113.	3023.	2909.	2911.	3022.	3116.	3130.
	25.0	3076.	3052.	2998.	2927.	2854.	2818.	2870.	2965.	3007.	2962.
	20.0	2863.	2851.	2835.	2819.	2811.	2852.	2903.	2945.	2930.	2850.
	15.0	2865.	2861.	2858.	2875.	2885.	2916.	2938.	2922.	2882.	2797.
	10.0	2944.	2943.	2934.	2946.	2946.	2942.	2916.	2883.	2845.	2774.
	5.0	2917.	2916.	2902.	2893.	2882.	2870.	2850.	2827.	2801.	2767.
	0.0	2742.	2742.	2742.	2742.	2742.	2742.	2742.	2742.	2742.	2742.

||
PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA



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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.	0.
	175.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	165.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	155.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	145.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	135.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	125.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	115.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	105.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	95.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	92.5	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	87.5	6.	6.	3.	1.	1.	0.	0.	0.	0.	0.	0.
	85.0	18.	15.	11.	8.	7.	8.	12.	22.	13.	5.	1.
V	82.5	363.	236.	41.	33.	31.	45.	57.	69.	76.	73.	70.
E	80.0	1270.	905.	109.	79.	71.	91.	118.	132.	158.	171.	172.
R	77.5	2343.	1805.	237.	130.	116.	138.	179.	208.	262.	279.	280.
T	75.0	3284.	2619.	474.	190.	169.	180.	224.	241.	329.	366.	368.
I	72.5	4236.	3506.	886.	260.	218.	220.	256.	251.	349.	378.	385.
C	70.0	4862.	4058.	1366.	333.	258.	257.	291.	262.	316.	328.	330.
A	69.0<<	5012.	4170.	1539.	362.	274.	270.	306.	269.	307.	305.	311.
L	67.5	5082.	4239.	1768.	402.	298.	290.	326.	285.	304.	280.	281.
	65.0	4937.	4227.	2103.	464.	335.	325.	355.	322.	316.	283.	279.
A	62.5	4757.	4205.	2395.	558.	365.	361.	375.	368.	342.	311.	303.
N	60.0	4683.	4231.	2667.	715.	399.	399.	385.	401.	385.	348.	337.
G	57.5	4651.	4300.	2908.	956.	442.	435.	398.	421.	421.	384.	374.
L	55.0	4560.	4280.	3092.	1246.	499.	468.	424.	432.	445.	418.	406.
E	52.5	4401.	4126.	3111.	1538.	591.	497.	453.	456.	472.	440.	429.
	50.0	4235.	4000.	3122.	1797.	730.	530.	484.	481.	491.	465.	457.
	47.5	4079.	3890.	3131.	1997.	911.	571.	518.	511.	502.	483.	479.
	45.0	3919.	3775.	3102.	2131.	1105.	650.	556.	539.	525.	511.	508.
	42.5	3763.	3636.	3057.	2212.	1286.	777.	602.	569.	555.	546.	544.
	40.0	3602.	3486.	2991.	2262.	1440.	914.	683.	604.	583.	571.	570.
	37.5	3448.	3339.	2911.	2288.	1570.	1045.	788.	676.	625.	604.	601.
	35.0	3303.	3208.	2836.	2303.	1686.	1179.	904.	777.	712.	678.	678.
	30.0	3075.	2979.	2695.	2313.	1882.	1484.	1180.	1013.	917.	875.	874.
	25.0	2896.	2811.	2592.	2339.	2054.	1777.	1531.	1343.	1230.	1175.	1176.
	20.0	2792.	2720.	2555.	2387.	2205.	2029.	1865.	1725.	1632.	1583.	1587.
	15.0	2748.	2691.	2569.	2451.	2337.	2229.	2137.	2058.	2001.	1967.	1955.
	10.0	2739.	2700.	2616.	2542.	2468.	2401.	2355.	2306.	2283.	2273.	2256.
	5.0	2748.	2728.	2685.	2647.	2610.	2571.	2548.	2520.	2507.	2508.	2489.
	0.0	2742.	2742.	2742.	2742.	2742.	2742.	2742.	2742.	2742.	2742.	2742.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	65
5- 10	193
10- 15	311
15- 20	415
20- 25	511
25- 30	606
30- 35	695
35- 40	769
40- 45	830
45- 50	889
50- 55	944
55- 60	978
60- 65	962
65- 70	902
70- 75	674
75- 80	351
80- 85	84
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	258
0- 20	985
0- 30	2101
0- 40	3566
0- 50	5285
0- 60	7207
0- 70	9070
0- 80	10096
0- 90	10183
0-100	10183
0-110	10183
0-120	10183
0-130	10183
0-140	10183
0-150	10183
0-160	10183
0-170	10183
0-180	10183



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