

REPORT NUMBER: ITL85761

ISSUE DATE: 10/23/15

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 48M 0 X 2ES 7 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 48 LEDS ON FOR THIS TEST.

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

INPUT ELECTRICAL: 120.0 VOLTS, 104.7 WATTS, 0.893 AMPS

LED DRIVER: LED ROADWAY LIGHTING J100UN, 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: 11540

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85776: 3768K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85776: 73

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

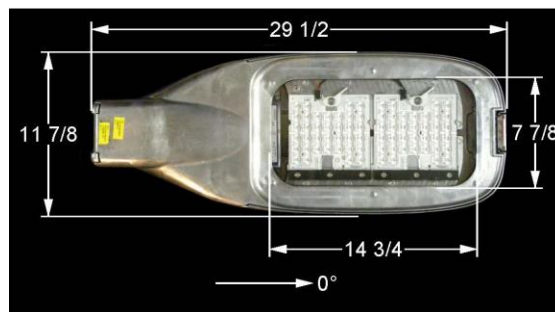
POWER FACTOR: 97.7 %

BUG RATING: B2 U0 G2

LUMINAIRE EFFICACY: 110.2 lm/W

IES CLASSIFICATION: Medium, Type II

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

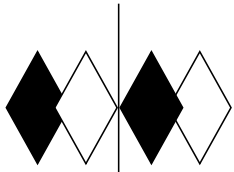


FLUX DISTRIBUTION

LUMENS	DOWNWARD	UPWARD	TOTALS
HOUSE SIDE	3764	0	3764
STREET SIDE	7776	0	7776
TOTALS	11540	0	11540

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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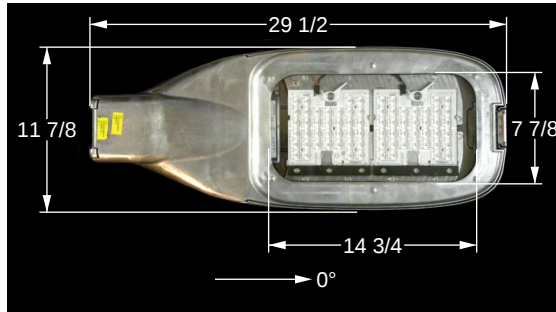
NVLAP
NVLAP LAB CODE: 200925-0

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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TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

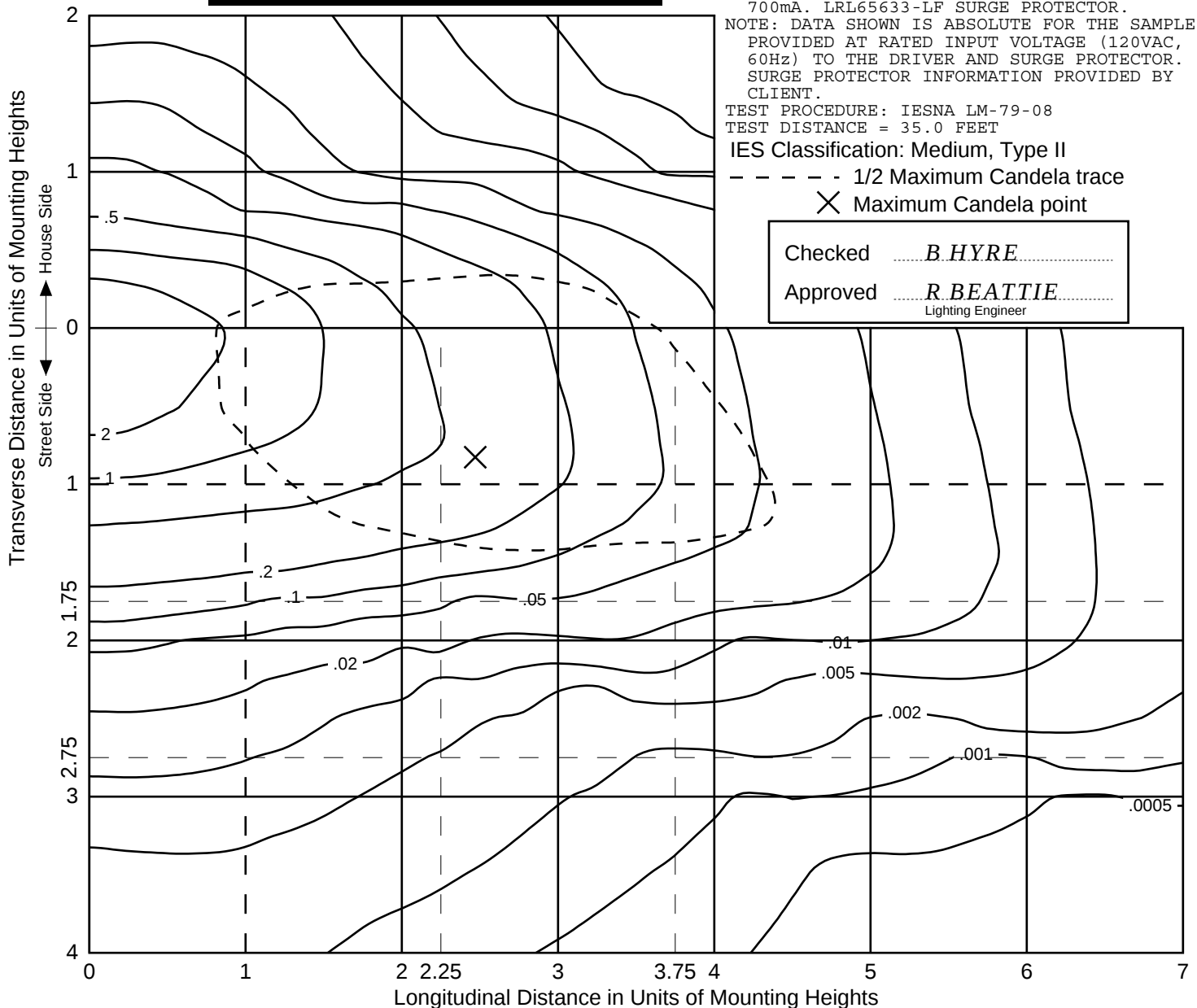
IES Classification: Medium, Type II

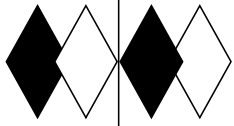
--- 1/2 Maximum Candela trace

X Maximum Candela point

Checked *B. HYRE*

Approved *R. BEATTIE*
Lighting Engineer





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PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 48M 0 X 2ES 7 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 48 LEDS ON FOR THIS TEST.

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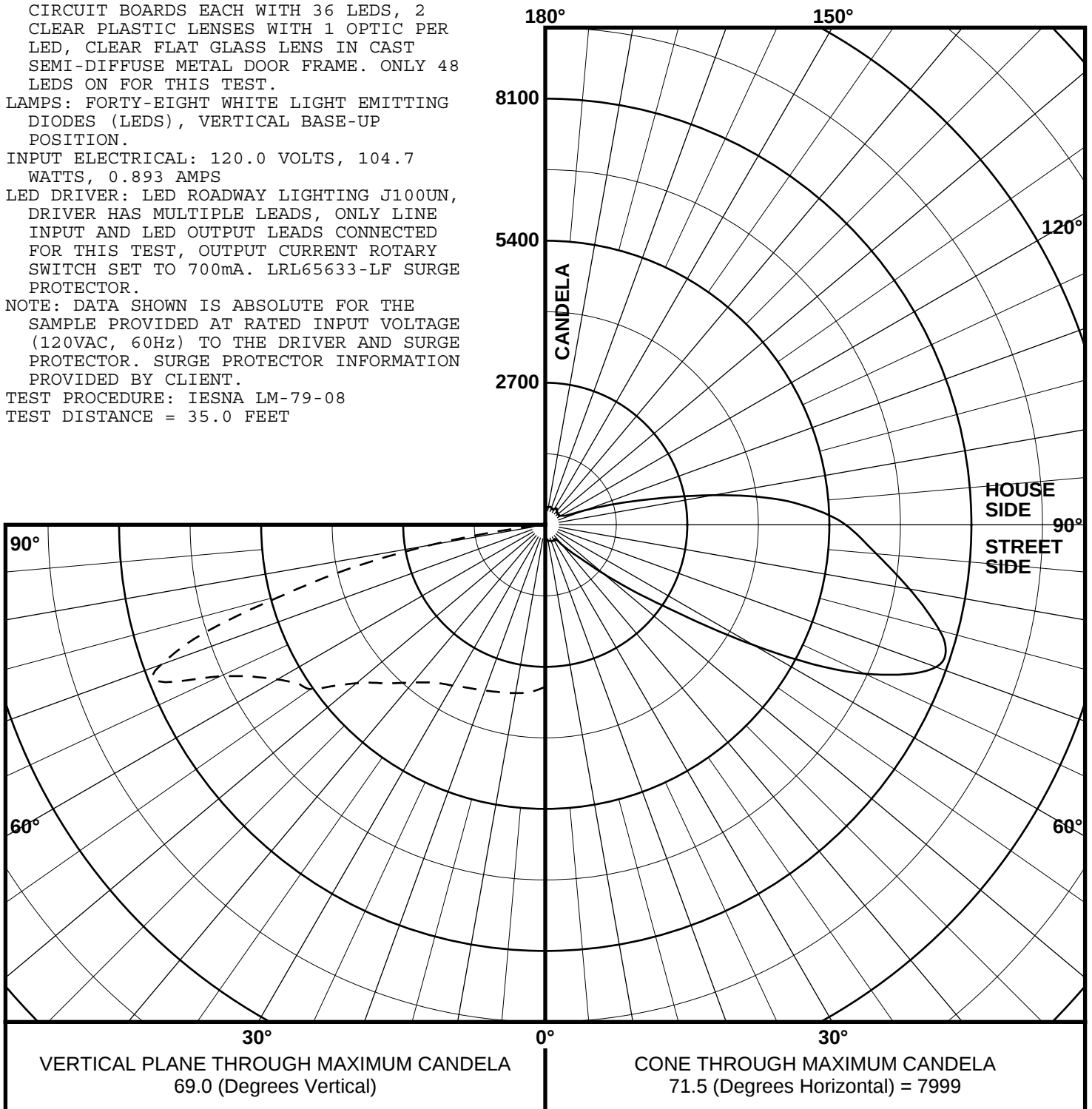
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TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

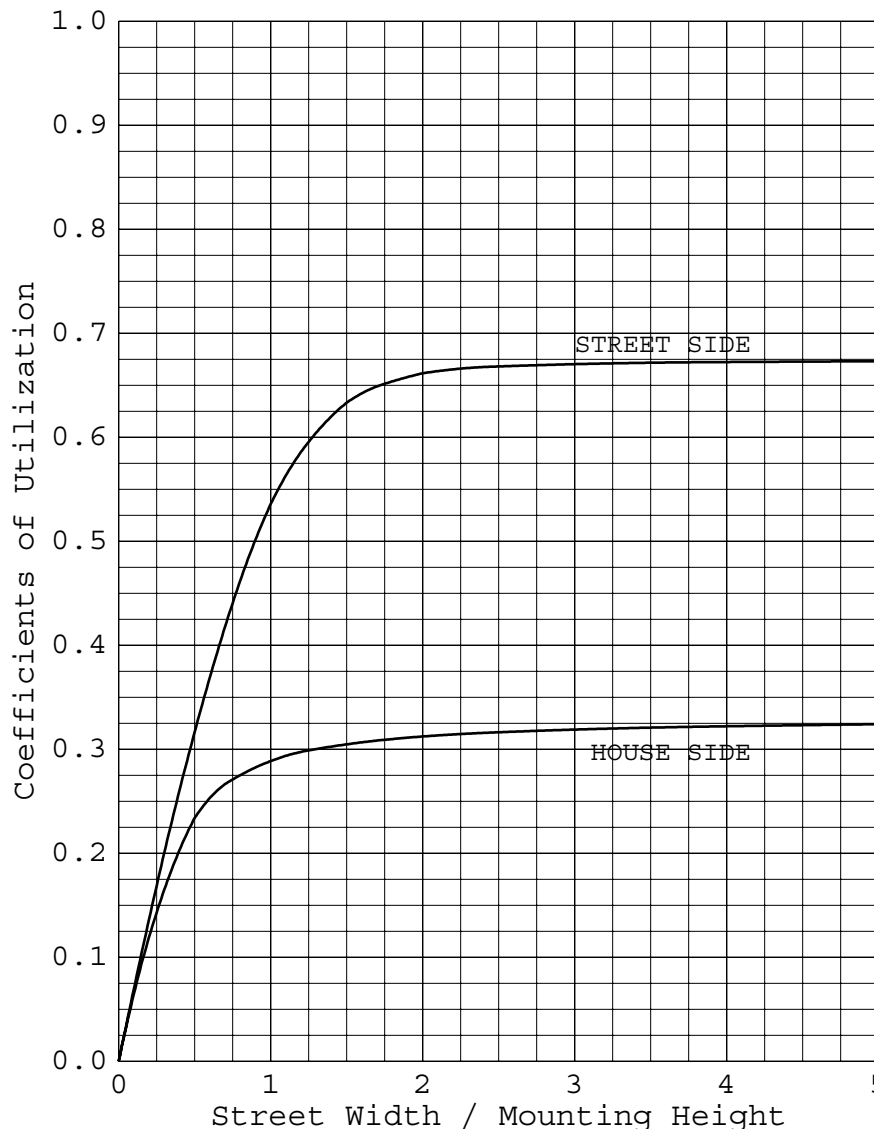




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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	7776	67.4
DOWNWARD HOUSE SIDE	3764	32.6
DOWNWARD TOTAL	11540	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	11540	100.0

EFFICACY = 110.2 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	7776.	67.4	
FL (0- 30)	1397.9	12.1	
FM (30- 60)	3933.9	34.1	
FH (60- 80)	2379.4	20.6	G2
FVH(80- 90)	64.9	0.6	G1
BACK LIGHT	3764.	32.6	
BL (0- 30)	992.1	8.6	B2
BM (30- 60)	1836.3	15.9	B2
BH (60- 80)	900.4	7.8	B2 G2
BVH(80- 90)	35.6	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	11540.	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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CANDELA TABULATION

	STREET	SIDE	LATERAL ANGLE									
		0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	71.5	75.0	85.0
	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	2.	2.	2.	1.	1.	1.	1.	3.	5.	7.	7.
	85.0	17.	18.	21.	20.	13.	12.	10.	13.	17.	17.	17.
V	82.5	46.	47.	60.	58.	42.	48.	41.	88.	639.	642.	418.
E	80.0	85.	90.	122.	93.	81.	99.	93.	317.	2201.	2442.	1652.
R	77.5	128.	134.	165.	125.	134.	137.	172.	1043.	3747.	4144.	3199.
T	75.0	155.	163.	192.	182.	185.	197.	313.	2761.	5152.	5524.	4327.
I	72.5	200.	209.	233.	244.	239.	310.	851.	4644.	6755.	6957.	5382.
C	70.0	269.	275.	291.	309.	300.	588.	2048.	6261.	7771.	7611.	6123.
A	69.0	<< 295.	302.	316.	338.	334.	813.	2575.	6699.	7999.	7761.	6315.
L	67.5	335.	345.	357.	389.	443.	1309.	3310.	6856.	7815.	7674.	6422.
	65.0	425.	442.	461.	578.	968.	2300.	4196.	6409.	6814.	6740.	6044.
A	62.5	694.	697.	771.	1060.	1668.	2948.	4423.	5921.	6253.	6172.	5667.
N	60.0	1104.	1113.	1212.	1543.	2073.	3118.	4343.	5604.	5877.	5806.	5474.
G	57.5	1440.	1448.	1527.	1812.	2258.	3152.	4285.	5404.	5604.	5528.	5334.
L	55.0	1659.	1668.	1739.	1981.	2409.	3173.	4217.	5305.	5445.	5338.	5185.
E	52.5	1833.	1837.	1894.	2134.	2560.	3200.	4104.	4903.	5022.	4995.	5000.
	50.0	1955.	1975.	2041.	2295.	2706.	3271.	4032.	4595.	4687.	4714.	4800.
	47.5	2086.	2121.	2196.	2442.	2847.	3344.	3955.	4371.	4444.	4490.	4611.
	45.0	2220.	2261.	2357.	2585.	2970.	3409.	3841.	4145.	4260.	4317.	4438.
	42.5	2372.	2416.	2531.	2798.	3111.	3467.	3770.	3957.	4078.	4151.	4282.
	40.0	2597.	2651.	2792.	3030.	3263.	3523.	3679.	3792.	3915.	3988.	4105.
	37.5	2939.	2994.	3093.	3239.	3393.	3561.	3573.	3662.	3777.	3848.	3946.
	35.0	3225.	3282.	3333.	3410.	3480.	3526.	3463.	3550.	3663.	3727.	3788.
	30.0	3509.	3566.	3566.	3560.	3479.	3321.	3299.	3428.	3528.	3566.	3553.
	25.0	3494.	3539.	3480.	3379.	3254.	3182.	3258.	3366.	3423.	3432.	3370.
	20.0	3213.	3260.	3224.	3184.	3180.	3233.	3295.	3350.	3353.	3336.	3232.
	15.0	3191.	3246.	3252.	3262.	3289.	3311.	3338.	3328.	3296.	3269.	3165.
	10.0	3292.	3346.	3344.	3334.	3342.	3341.	3323.	3283.	3249.	3225.	3133.
	5.0	3256.	3307.	3298.	3280.	3271.	3258.	3242.	3209.	3185.	3166.	3114.
	0.0	3078.	3078.	3078.	3078.	3078.	3078.	3078.	3078.	3078.	3078.	3078.

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.
	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	7.	6.	4.	2.	1.	1.	0.	1.	0.	0.
	85.0	17.	15.	12.	11.	9.	15.	23.	41.	34.	12.
V	82.5	411.	268.	42.	44.	42.	65.	85.	103.	128.	126.
E	80.0	1491.	1083.	119.	95.	89.	126.	166.	194.	244.	255.
R	77.5	2770.	2068.	264.	153.	143.	178.	235.	286.	377.	413.
T	75.0	3838.	3001.	535.	220.	205.	225.	275.	296.	436.	487.
I	72.5	4851.	4001.	996.	300.	257.	268.	310.	291.	400.	445.
C	70.0	5546.	4632.	1534.	377.	301.	308.	352.	310.	358.	354.
A	69.0<<	5709.	4758.	1721.	406.	317.	322.	368.	323.	355.	329.
L	67.5	5789.	4817.	1980.	443.	347.	343.	389.	346.	361.	319.
	65.0	5560.	4777.	2379.	512.	387.	383.	420.	392.	381.	338.
A	62.5	5377.	4770.	2724.	617.	422.	425.	444.	442.	416.	374.
N	60.0	5300.	4802.	3017.	805.	461.	466.	448.	478.	464.	418.
G	57.5	5256.	4873.	3286.	1090.	509.	505.	467.	496.	500.	460.
L	55.0	5141.	4831.	3495.	1426.	573.	545.	497.	507.	527.	494.
E	52.5	4952.	4648.	3477.	1758.	677.	577.	528.	533.	557.	516.
	50.0	4776.	4516.	3503.	2039.	843.	613.	566.	567.	573.	542.
	47.5	4594.	4381.	3513.	2261.	1052.	660.	603.	597.	588.	563.
	45.0	4408.	4244.	3482.	2405.	1269.	756.	643.	626.	611.	593.
	42.5	4233.	4086.	3435.	2494.	1471.	903.	697.	656.	641.	627.
	40.0	4055.	3923.	3366.	2552.	1645.	1057.	797.	701.	672.	655.
	37.5	3890.	3764.	3280.	2584.	1791.	1201.	928.	792.	729.	701.
	35.0	3728.	3611.	3196.	2600.	1921.	1351.	1054.	905.	834.	801.
	30.0	3470.	3361.	3038.	2618.	2144.	1700.	1369.	1179.	1069.	1022.
	25.0	3274.	3174.	2923.	2649.	2335.	2031.	1759.	1559.	1425.	1357.
	20.0	3146.	3065.	2878.	2697.	2506.	2319.	2128.	1988.	1875.	1813.
	15.0	3093.	3025.	2891.	2763.	2650.	2542.	2432.	2354.	2283.	2233.
	10.0	3082.	3032.	2938.	2858.	2783.	2722.	2672.	2621.	2595.	2571.
	5.0	3088.	3062.	3009.	2968.	2930.	2890.	2866.	2844.	2823.	2811.
	0.0	3078.	3078.	3078.	3078.	3078.	3078.	3078.	3078.	3078.	3078.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	74
5- 10	218
10- 15	353
15- 20	472
20- 25	582
25- 30	692
30- 35	791
35- 40	872
40- 45	937
45- 50	1002
50- 55	1065
55- 60	1104
60- 65	1082
65- 70	1019
70- 75	769
75- 80	409
80- 85	97
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	292
0- 20	1117
0- 30	2390
0- 40	4053
0- 50	5992
0- 60	8160
0- 70	10261
0- 80	11440
0- 90	11540
0-100	11540
0-110	11540
0-120	11540
0-130	11540
0-140	11540
0-150	11540
0-160	11540
0-170	11540
0-180	11540



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