

REPORT NUMBER: ITL87841-GONIOPHOTOMETRY

ISSUE DATE: 07/13/16

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 72M 0 X 4AH 7 XX 4 XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY PAINTED 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 GRAY PAINTED METAL DOOR FRAME.

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

INPUT ELECTRICAL: 120.0 VOLTS, 151.2 WATTS, 1.27 AMPS

LED DRIVER: LED ROADWAY LIGHTING J150UNV2, 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: 15163

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL87841-SPHERE: 3101K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL87841-SPHERE: 73

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

POWER FACTOR: 99.2 %

BUG RATING: B3 U0 G3

LUMINAIRE EFFICACY: 100.3 lm/W

IES CLASSIFICATION: Medium, Type III

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



FLUX DISTRIBUTION

LUMENS	DOWNWARD	UPWARD	TOTALS
HOUSE SIDE	6191	0	6191
STREET SIDE	8972	0	8972
TOTALS	15163	0	15163

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



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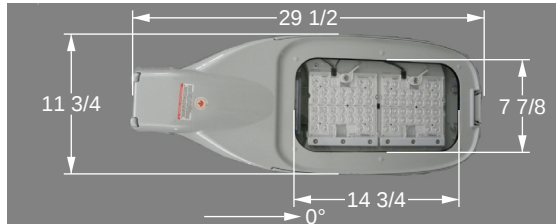
NVLAP
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.

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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 30 foot mounting height.



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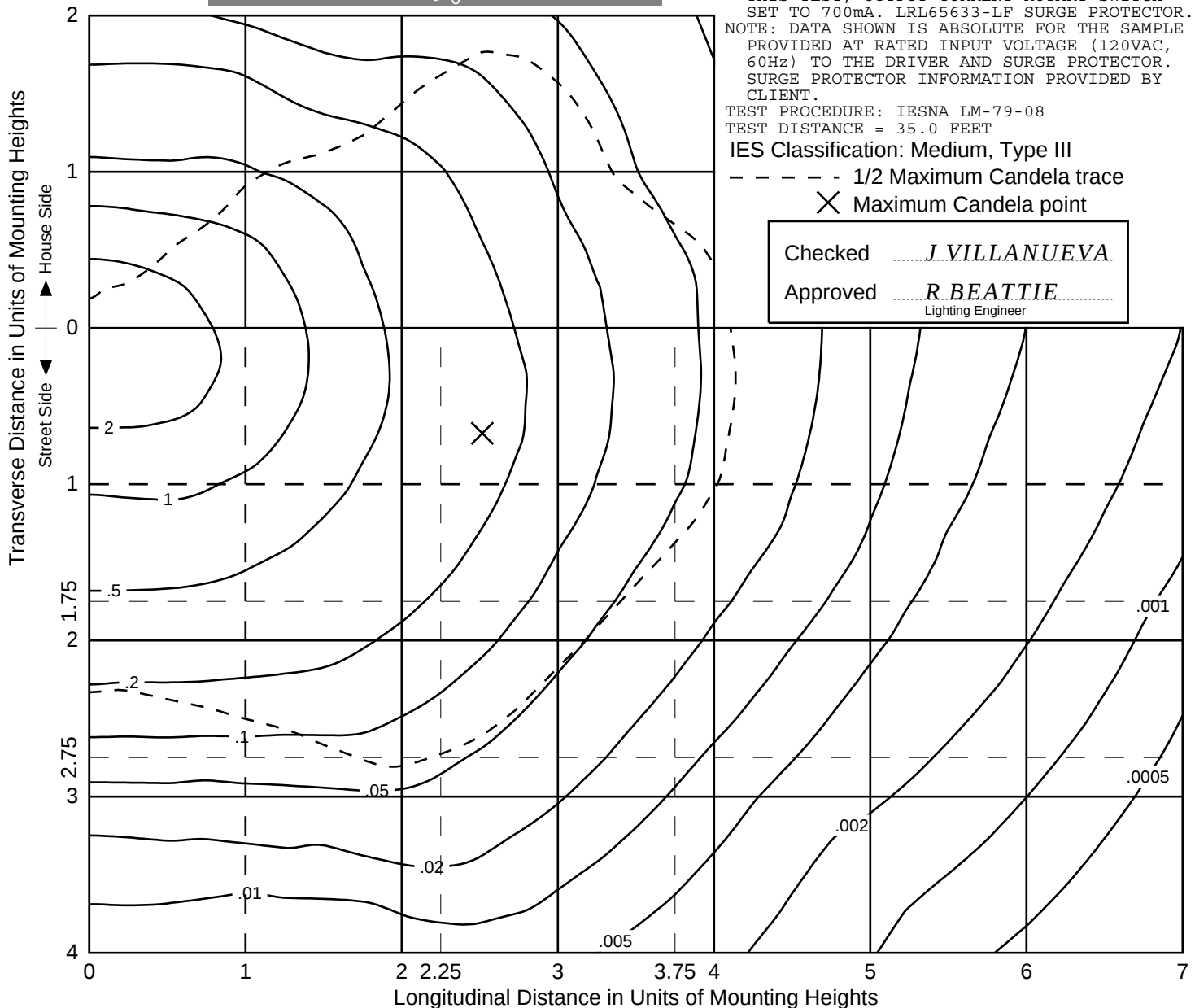
IES Classification: Medium, Type III

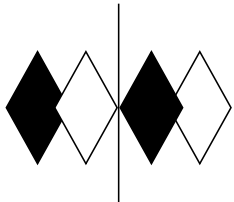
--- 1/2 Maximum Candela trace

X Maximum Candela point

CheckedJ.VILLANUEVA.....

ApprovedR.BEATTIE.....
Lighting Engineer





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CATALOG NUMBER: NXT 72M 0 X 4AH 7 XX 4

XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY PAINTED 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 GRAY PAINTED METAL DOOR FRAME.

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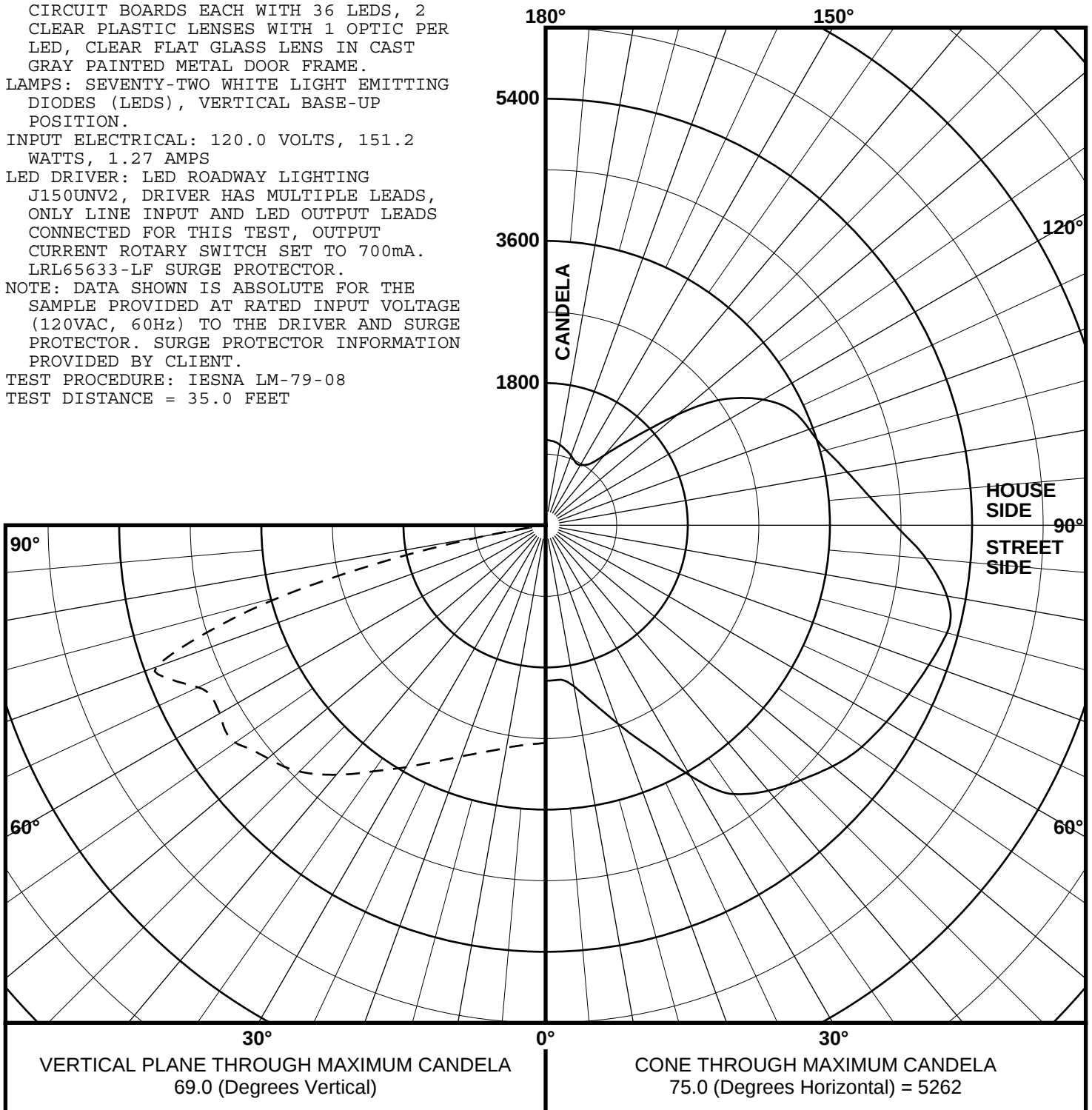
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TEST DISTANCE = 35.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

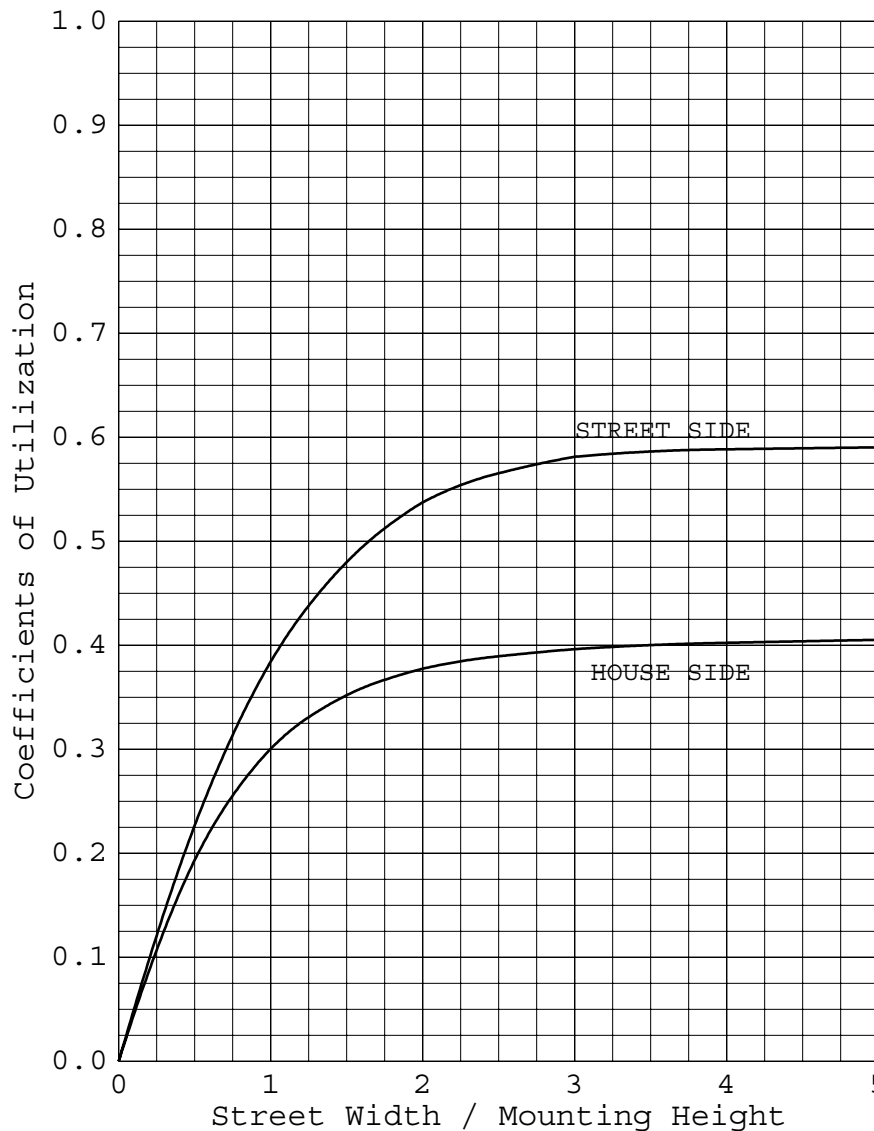




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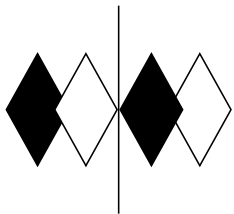
COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	8972	59.2
DOWNWARD HOUSE SIDE	6191	40.8
DOWNWARD TOTAL	15163	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	15163	100.0

EFFICACY = 100.3 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	8972.	59.2	
FL (0- 30)	1352.1	8.9	
FM (30- 60)	4398.2	29.0	
FH (60- 80)	3166.6	20.9	G2
FVH(80- 90)	55.5	0.4	G1
BACK LIGHT	6191.	40.8	
BL (0- 30)	1135.6	7.5	B3
BM (30- 60)	3039.1	20.0	B3
BH (60- 80)	1930.8	12.7	B3 G3
BVH(80- 90)	85.3	0.6	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	15163.	100.0	

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

BUG RATING: B3 U0 G3



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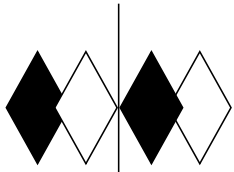
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CANDELA TABULATION

	STREET SIDE										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0
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.	6.	5.	5.	4.	5.	5.	6.	6.	6.
85.0	60.	65.	38.	25.	25.	23.	19.	17.	15.	14.	14.
V 82.5	182.	195.	107.	72.	95.	102.	95.	133.	171.	329.	447.
E 80.0	298.	300.	180.	159.	329.	400.	371.	550.	782.	1031.	1161.
R 77.5	347.	350.	279.	357.	1049.	1184.	1294.	1536.	2034.	2152.	2161.
T 75.0	473.	487.	480.	803.	2082.	2446.	2565.	2885.	3422.	3309.	3140.
I 72.5	747.	780.	973.	1790.	3232.	3713.	4071.	4128.	4474.	4200.	3910.
C 70.0	1615.	1664.	1965.	2769.	3992.	4445.	4818.	5021.	5243.	4781.	4357.
A 69.0<<	1969.	1964.	2329.	3089.	4155.	4565.	4889.	5070.	5262.	4837.	4432.
L 67.5	2438.	2425.	2815.	3483.	4278.	4626.	4878.	4996.	5117.	4744.	4397.
65.0	3107.	3047.	3384.	3831.	4301.	4567.	4750.	4822.	4856.	4543.	4258.
A 62.5	3369.	3334.	3563.	3897.	4243.	4502.	4649.	4739.	4753.	4522.	4284.
N 60.0	3365.	3356.	3546.	3871.	4172.	4430.	4614.	4761.	4766.	4589.	4373.
G 57.5	3290.	3294.	3503.	3826.	4107.	4365.	4601.	4812.	4816.	4681.	4480.
L 55.0	3203.	3216.	3443.	3746.	4016.	4282.	4584.	4810.	4799.	4667.	4477.
E 52.5	3083.	3105.	3320.	3603.	3867.	4142.	4474.	4688.	4676.	4557.	4379.
50.0	2952.	2964.	3146.	3427.	3699.	3999.	4378.	4592.	4591.	4457.	4289.
47.5	2828.	2832.	2988.	3273.	3571.	3907.	4307.	4513.	4513.	4335.	4192.
45.0	2715.	2725.	2873.	3162.	3481.	3864.	4260.	4427.	4409.	4183.	4065.
42.5	2646.	2662.	2810.	3088.	3423.	3843.	4210.	4333.	4276.	4033.	3934.
40.0	2627.	2652.	2799.	3071.	3414.	3833.	4153.	4240.	4123.	3897.	3805.
37.5	2676.	2703.	2845.	3107.	3452.	3824.	4068.	4126.	3964.	3765.	3684.
35.0	2764.	2804.	2934.	3185.	3503.	3793.	3974.	3984.	3804.	3640.	3569.
30.0	3066.	3109.	3195.	3362.	3554.	3697.	3728.	3667.	3537.	3413.	3360.
25.0	3309.	3353.	3394.	3477.	3545.	3503.	3427.	3381.	3302.	3224.	3182.
20.0	3308.	3347.	3324.	3310.	3293.	3250.	3205.	3170.	3114.	3068.	3047.
15.0	3067.	3099.	3082.	3066.	3064.	3051.	3027.	2996.	2972.	2952.	2947.
10.0	2893.	2923.	2912.	2901.	2897.	2887.	2870.	2868.	2863.	2860.	2859.
5.0	2758.	2788.	2781.	2779.	2784.	2787.	2786.	2789.	2791.	2790.	2787.
0.0	2754.	2754.	2754.	2754.	2754.	2754.	2754.	2754.	2754.	2754.	2754.

||
PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA



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CANDELA TABULATION

	HOUSE SIDE		LATERAL ANGLE							
	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.
	175.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	165.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	155.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	145.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	135.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	125.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	115.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	105.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	95.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	92.5	0.	0.	0.	0.	0.	0.	0.	0.	0.
	90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.
	87.5	6.	5.	5.	4.	4.	4.	5.	4.	1.
	85.0	14.	15.	17.	23.	24.	56.	97.	128.	52.
V	82.5	488.	220.	280.	329.	107.	160.	246.	309.	287.
E	80.0	1237.	721.	771.	841.	278.	299.	398.	500.	566.
R	77.5	2176.	1469.	1448.	1635.	551.	430.	537.	670.	815.
T	75.0	3123.	2356.	2320.	2187.	942.	552.	644.	757.	910.
I	72.5	3745.	3080.	2967.	2614.	1301.	695.	753.	864.	953.
C	70.0	4068.	3576.	3374.	2789.	1517.	855.	844.	958.	1040.
A	69.0<<	4121.	3676.	3439.	2789.	1557.	941.	886.	988.	1068.
L	67.5	4109.	3729.	3453.	2716.	1599.	1097.	972.	1038.	1111.
	65.0	4021.	3740.	3476.	2641.	1725.	1413.	1205.	1180.	1209.
A	62.5	4071.	3813.	3548.	2728.	1945.	1775.	1478.	1349.	1332.
N	60.0	4167.	3890.	3598.	2880.	2214.	2125.	1706.	1458.	1355.
G	57.5	4290.	3978.	3652.	3013.	2414.	2289.	1868.	1518.	1336.
L	55.0	4309.	4020.	3691.	3082.	2468.	2226.	1860.	1521.	1328.
E	52.5	4229.	3962.	3658.	3080.	2386.	2015.	1728.	1465.	1318.
	50.0	4158.	3913.	3592.	3043.	2353.	1865.	1611.	1426.	1345.
	47.5	4072.	3845.	3521.	3022.	2403.	1883.	1597.	1448.	1394.
	45.0	3962.	3753.	3437.	3011.	2476.	1994.	1689.	1535.	1480.
	42.5	3848.	3647.	3343.	2981.	2534.	2104.	1816.	1658.	1588.
	40.0	3727.	3532.	3263.	2950.	2568.	2201.	1936.	1782.	1707.
	37.5	3617.	3430.	3189.	2919.	2594.	2280.	2047.	1897.	1821.
	35.0	3505.	3328.	3122.	2890.	2608.	2342.	2144.	2007.	1932.
	30.0	3310.	3161.	2998.	2828.	2623.	2442.	2295.	2190.	2134.
	25.0	3147.	3030.	2906.	2792.	2657.	2534.	2434.	2362.	2317.
	20.0	3025.	2938.	2842.	2766.	2685.	2604.	2536.	2490.	2458.
	15.0	2933.	2868.	2798.	2746.	2696.	2648.	2604.	2573.	2555.
	10.0	2849.	2812.	2766.	2723.	2695.	2666.	2639.	2627.	2615.
	5.0	2782.	2767.	2750.	2724.	2708.	2690.	2672.	2669.	2660.
	0.0	2754.	2754.	2754.	2754.	2754.	2754.	2754.	2754.	2754.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	66
5- 10	198
10- 15	337
15- 20	482
20- 25	632
25- 30	774
30- 35	906
35- 40	1032
40- 45	1157
45- 50	1292
50- 55	1457
55- 60	1594
60- 65	1625
65- 70	1598
70- 75	1266
75- 80	608
80- 85	135
85- 90	6
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	264
0- 20	1082
0- 30	2488
0- 40	4426
0- 50	6874
0- 60	9925
0- 70	13148
0- 80	15022
0- 90	15163
0-100	15163
0-110	15163
0-120	15163
0-130	15163
0-140	15163
0-150	15163
0-160	15163
0-170	15163
0-180	15163



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