

itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

NVLAP
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL85364

ISSUE DATE: 08/14/15

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 72M 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.

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

INPUT ELECTRICAL: 120.0 VOLTS, 101.9 WATTS, 0.856 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: 12174

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85372: 3763K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85372: 73

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

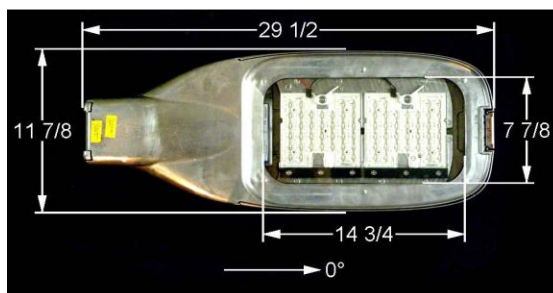
POWER FACTOR: 99.2 %

BUG RATING: B3 U0 G2

LUMINAIRE EFFICACY: 119.5 lm/W

IES CLASSIFICATION: Medium, Type II

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

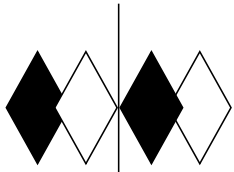


FLUX DISTRIBUTION

LUMENS	DOWNWARD	UPWARD	TOTALS
HOUSE SIDE	3944	0	3944
STREET SIDE	8230	0	8230
TOTALS	12174	0	12174

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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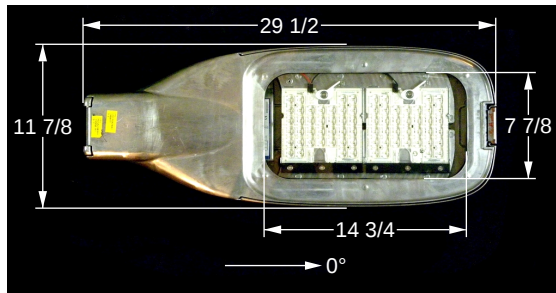
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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 30 foot mounting height.



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PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 72M 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.

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TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

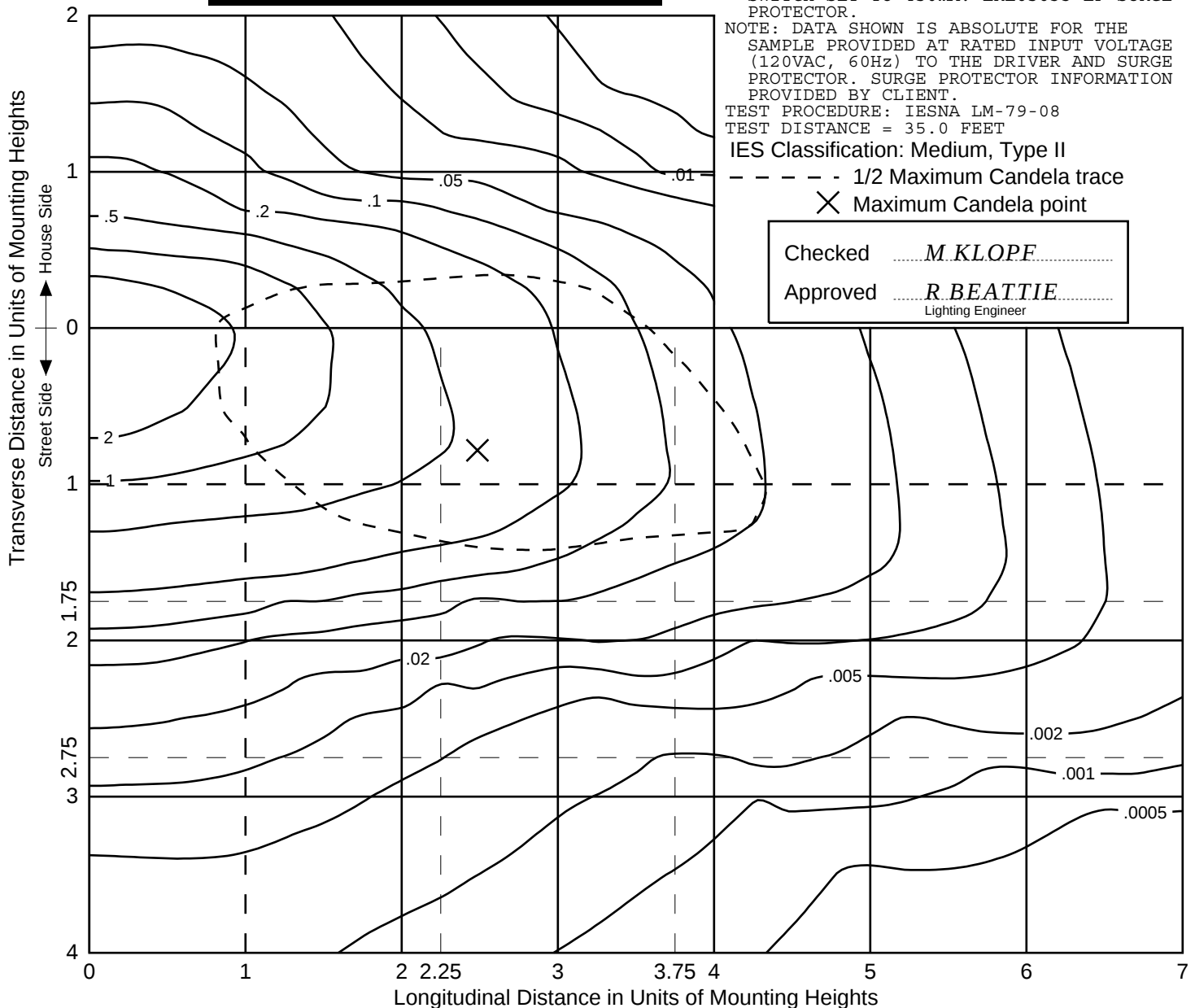
IES Classification: Medium, Type II

--- 1/2 Maximum Candela trace

X Maximum Candela point

CheckedM.KLOPF.....

ApprovedR.BEATTIE.....
Lighting Engineer



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CATALOG NUMBER: NXT 72M 0 X 2ES 4 XX 3

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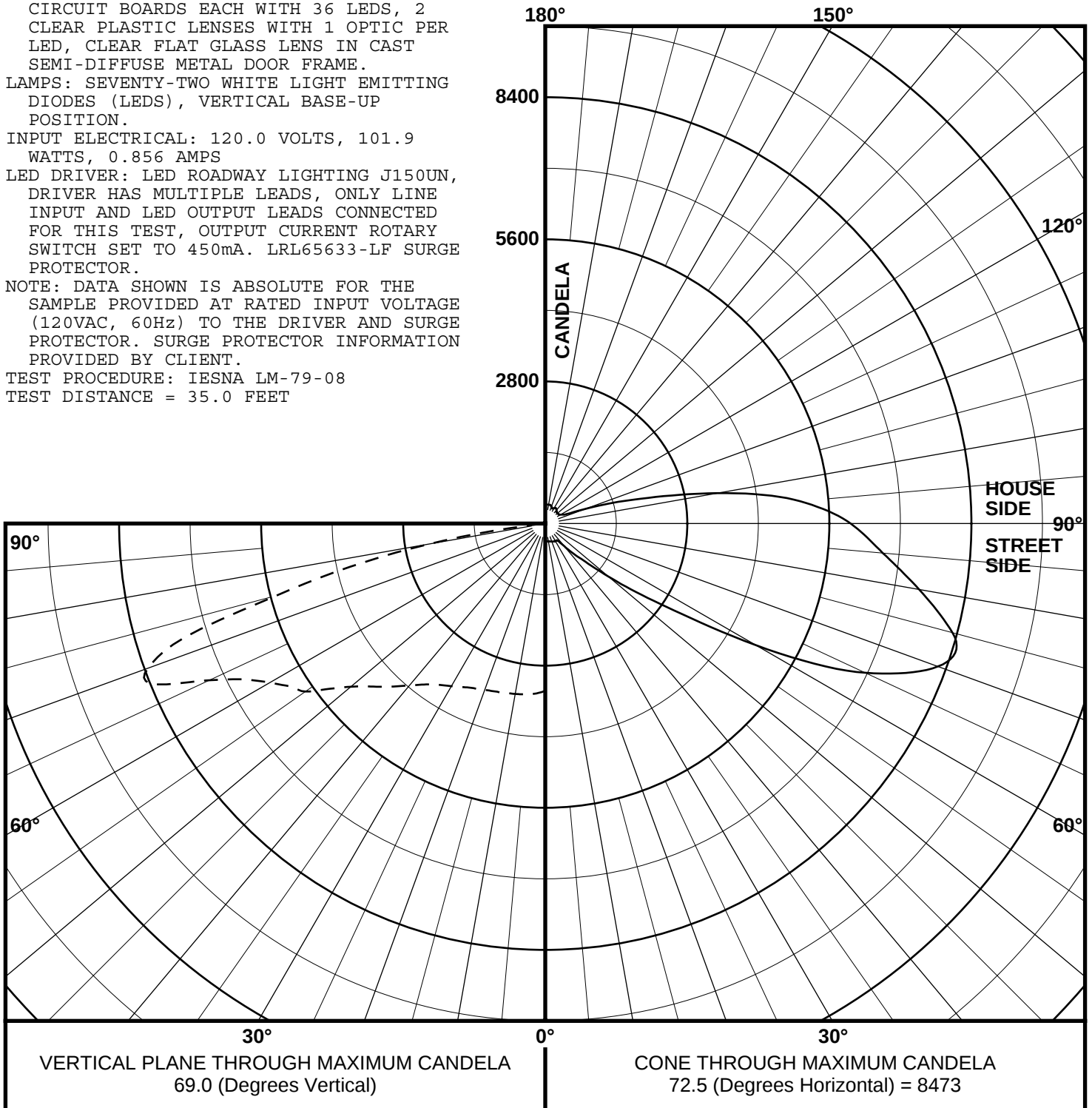
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TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

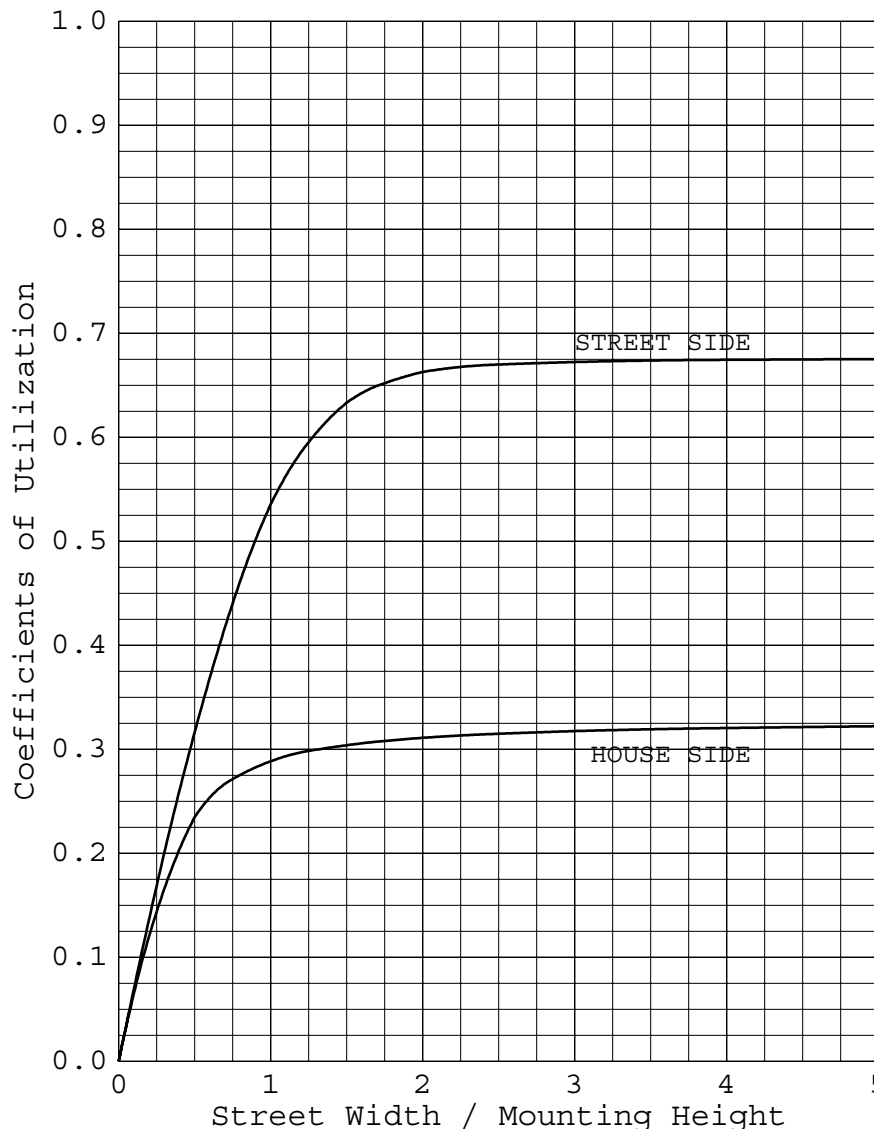




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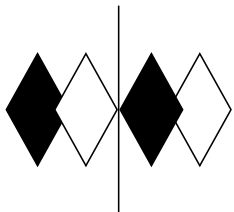
COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	8230	67.6
DOWNWARD HOUSE SIDE	3944	32.4
DOWNWARD TOTAL	12174	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	12174	100.0

EFFICACY = 119.5 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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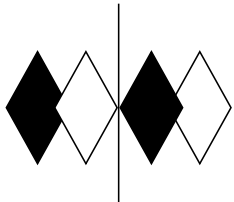
FLUX DISTRIBUTION BY SOLID ANGLE

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

	LUMENS	PERCENT OF FIXTURE	BUG ZONE RATINGS
FORWARD LIGHT	8230.	67.6	
FL (0- 30)	1464.3	12.0	
FM (30- 60)	4158.7	34.2	
FH (60- 80)	2537.0	20.8	G2
FVH(80- 90)	69.8	0.6	G1
BACK LIGHT	3944.	32.4	
BL (0- 30)	1045.8	8.6	B3
BM (30- 60)	1925.8	15.8	B2
BH (60- 80)	937.8	7.7	B2 G2
BVH(80- 90)	35.0	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	12174.	100.0	

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

BUG RATING: B3 U0 G2



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CANDELA TABULATION

	STREET SIDE										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	72.5	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	3.	3.	3.	2.	2.	2.	3.	5.	7.	9.	9.
85.0	19.	19.	25.	23.	16.	14.	14.	17.	24.	24.	21.
V 82.5	50.	52.	72.	64.	46.	53.	51.	115.	716.	740.	453.
E 80.0	94.	99.	131.	95.	88.	103.	107.	387.	2341.	2559.	1786.
R 77.5	131.	137.	170.	132.	141.	145.	194.	1157.	3941.	4301.	3411.
T 75.0	159.	168.	196.	192.	194.	215.	365.	2913.	5482.	5780.	4560.
I 72.5	216.	220.	244.	257.	256.	350.	970.	4882.	7446.	7452.	5734.
C 70.0	302.	301.	322.	346.	344.	696.	2208.	6529.	8331.	8202.	6507.
A 69.0<<	354.	352.	367.	391.	403.	959.	2752.	6959.	8473.	8310.	6681.
L 67.5	421.	425.	436.	469.	568.	1492.	3503.	7185.	8286.	8161.	6751.
65.0	551.	558.	602.	715.	1139.	2506.	4399.	6766.	7303.	7310.	6379.
A 62.5	835.	837.	954.	1222.	1851.	3154.	4652.	6278.	6656.	6622.	5981.
N 60.0	1249.	1246.	1377.	1674.	2259.	3319.	4578.	5933.	6268.	6208.	5773.
G 57.5	1576.	1576.	1677.	1931.	2425.	3334.	4513.	5728.	5973.	5917.	5622.
L 55.0	1794.	1797.	1883.	2106.	2571.	3349.	4450.	5613.	5773.	5709.	5477.
E 52.5	1967.	1970.	2040.	2263.	2721.	3374.	4342.	5197.	5350.	5348.	5286.
50.0	2098.	2107.	2190.	2427.	2870.	3434.	4261.	4899.	5001.	5020.	5078.
47.5	2228.	2253.	2345.	2578.	3010.	3515.	4185.	4636.	4748.	4786.	4886.
45.0	2364.	2387.	2503.	2735.	3125.	3562.	4054.	4395.	4549.	4602.	4706.
42.5	2506.	2551.	2682.	2944.	3262.	3627.	3973.	4194.	4351.	4415.	4530.
40.0	2765.	2795.	2963.	3170.	3408.	3693.	3872.	4017.	4166.	4227.	4335.
37.5	3086.	3135.	3249.	3369.	3547.	3720.	3757.	3864.	4001.	4056.	4147.
35.0	3358.	3401.	3454.	3546.	3649.	3682.	3640.	3741.	3871.	3917.	3979.
30.0	3668.	3716.	3717.	3702.	3620.	3474.	3471.	3597.	3701.	3721.	3727.
25.0	3629.	3679.	3607.	3514.	3412.	3360.	3409.	3522.	3567.	3571.	3529.
20.0	3371.	3420.	3400.	3373.	3354.	3380.	3446.	3500.	3488.	3475.	3404.
15.0	3343.	3397.	3394.	3404.	3428.	3461.	3497.	3480.	3441.	3425.	3351.
10.0	3446.	3500.	3502.	3508.	3517.	3501.	3485.	3446.	3409.	3397.	3332.
5.0	3434.	3479.	3470.	3461.	3448.	3428.	3415.	3395.	3374.	3364.	3323.
0.0	3297.	3297.	3297.	3297.	3297.	3297.	3297.	3297.	3297.	3297.	3297.

||
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	8.	8.	4.	4.	3.	2.	1.	1.	0.	0.
	85.0	20.	19.	14.	12.	11.	13.	21.	32.	25.	8.
V	82.5	407.	324.	44.	42.	42.	60.	79.	93.	113.	114.
E	80.0	1469.	1165.	122.	93.	89.	117.	156.	175.	214.	231.
R	77.5	2843.	2239.	270.	151.	142.	173.	230.	262.	333.	370.
T	75.0	3944.	3200.	541.	220.	205.	222.	284.	302.	409.	457.
I	72.5	5124.	4255.	1054.	304.	260.	265.	318.	314.	434.	477.
C	70.0	5862.	4915.	1626.	385.	305.	305.	353.	321.	391.	406.
A	69.0<<	6021.	5044.	1837.	416.	320.	321.	369.	327.	379.	376.
L	67.5	6098.	5117.	2116.	457.	348.	342.	391.	342.	368.	344.
	65.0	5882.	5073.	2526.	528.	389.	383.	422.	384.	373.	336.
A	62.5	5667.	5040.	2884.	639.	424.	430.	442.	437.	404.	369.
N	60.0	5580.	5066.	3211.	824.	464.	474.	447.	473.	453.	411.
G	57.5	5541.	5152.	3495.	1130.	514.	515.	466.	493.	494.	454.
L	55.0	5427.	5132.	3712.	1489.	582.	550.	498.	506.	523.	493.
E	52.5	5237.	4952.	3732.	1850.	694.	580.	530.	537.	556.	518.
	50.0	5047.	4797.	3744.	2165.	858.	617.	566.	565.	577.	545.
	47.5	4869.	4666.	3752.	2405.	1085.	666.	608.	600.	588.	565.
	45.0	4683.	4523.	3713.	2565.	1325.	765.	652.	635.	618.	599.
	42.5	4499.	4357.	3659.	2658.	1545.	921.	707.	670.	654.	643.
	40.0	4308.	4179.	3575.	2713.	1725.	1089.	807.	715.	687.	672.
	37.5	4122.	4001.	3481.	2742.	1888.	1249.	941.	803.	739.	711.
	35.0	3945.	3835.	3389.	2753.	2023.	1409.	1080.	926.	850.	808.
	30.0	3668.	3560.	3215.	2762.	2256.	1777.	1412.	1210.	1101.	1046.
	25.0	3460.	3355.	3092.	2788.	2457.	2115.	1846.	1616.	1487.	1422.
	20.0	3332.	3246.	3048.	2844.	2636.	2425.	2243.	2082.	1969.	1904.
	15.0	3287.	3222.	3074.	2926.	2794.	2668.	2558.	2470.	2402.	2352.
	10.0	3285.	3238.	3143.	3044.	2953.	2876.	2810.	2770.	2736.	2708.
	5.0	3298.	3275.	3229.	3181.	3134.	3089.	3049.	3031.	3014.	2994.
	0.0	3297.	3297.	3297.	3297.	3297.	3297.	3297.	3297.	3297.	3297.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	78
5- 10	231
10- 15	371
15- 20	496
20- 25	610
25- 30	723
30- 35	828
35- 40	915
40- 45	988
45- 50	1059
50- 55	1126
55- 60	1168
60- 65	1153
65- 70	1085
70- 75	815
75- 80	422
80- 85	101
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	309
0- 20	1177
0- 30	2510
0- 40	4254
0- 50	6300
0- 60	8595
0- 70	10832
0- 80	12069
0- 90	12174
0-100	12174
0-110	12174
0-120	12174
0-130	12174
0-140	12174
0-150	12174
0-160	12174
0-170	12174
0-180	12174



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