

REPORT NUMBER: ITL85765

ISSUE DATE: 10/15/15

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 60M 0 X 2ES 6 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, 113.4 WATTS, 0.956 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 600mA. 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: 12804

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85780: 3774K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85780: 73

LED DC DRIVE CURRENT (mA): 600 (PROVIDED BY CLIENT)

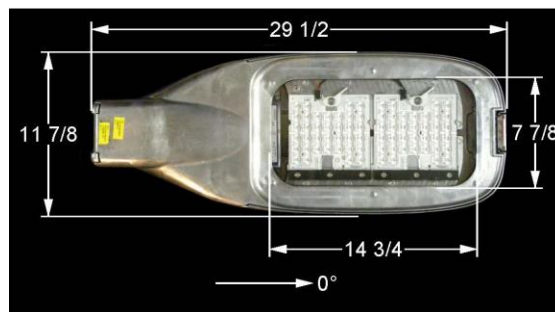
POWER FACTOR: 98.8 %

BUG RATING: B3 U0 G2

LUMINAIRE EFFICACY: 112.9 lm/W

IES CLASSIFICATION: Medium, Type II

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

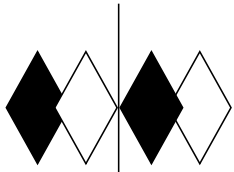


FLUX DISTRIBUTION

LUMENS	DOWNWARD	UPWARD	TOTALS
HOUSE SIDE	4145	0	4145
STREET SIDE	8659	0	8659
TOTALS	12804	0	12804

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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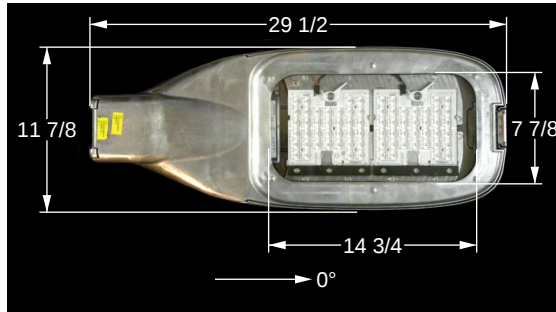
NVLAP
NVLAP LAB CODE: 200925-0

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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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 600mA. 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

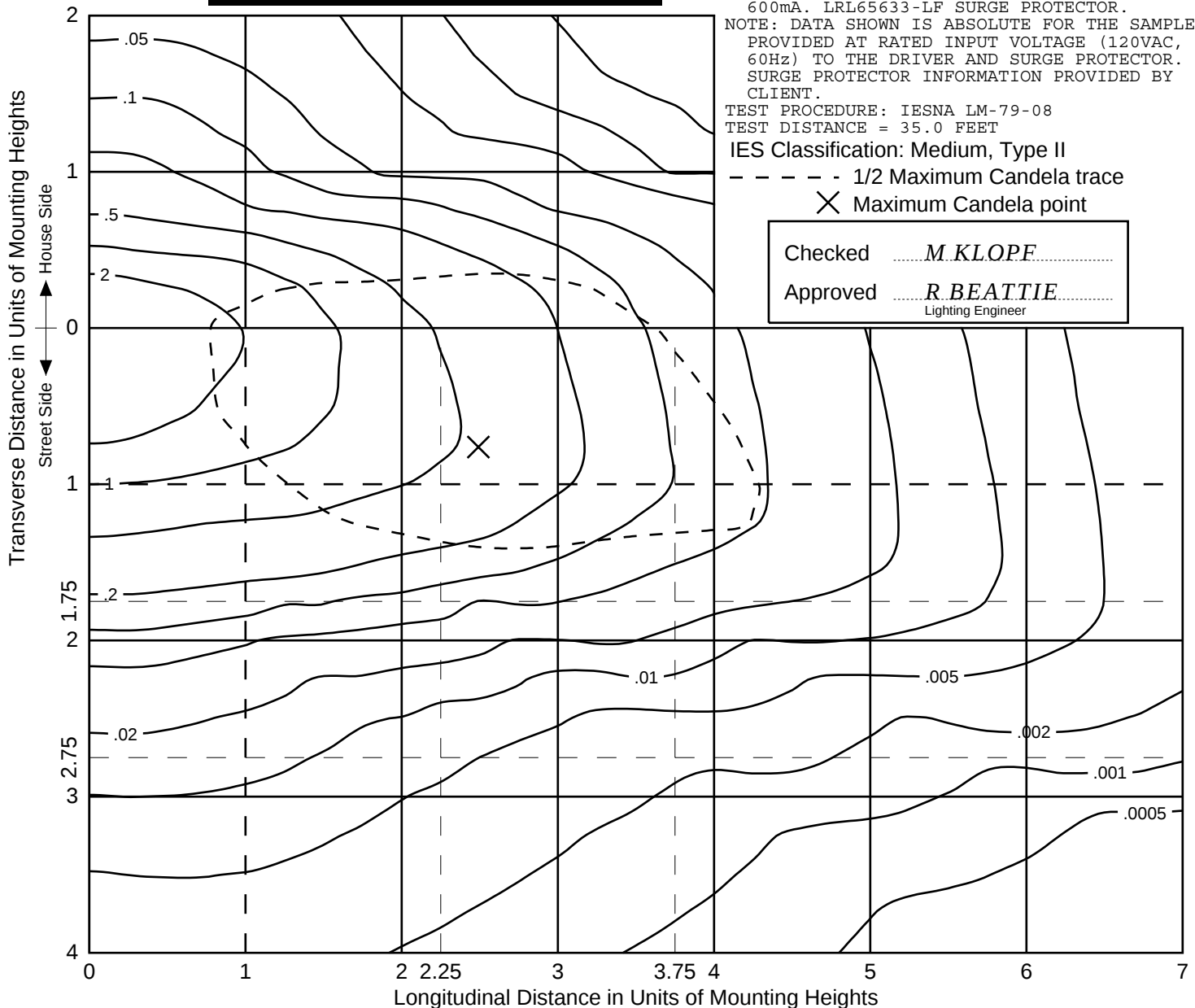
IES Classification: Medium, Type II

--- 1/2 Maximum Candela trace

X Maximum Candela point

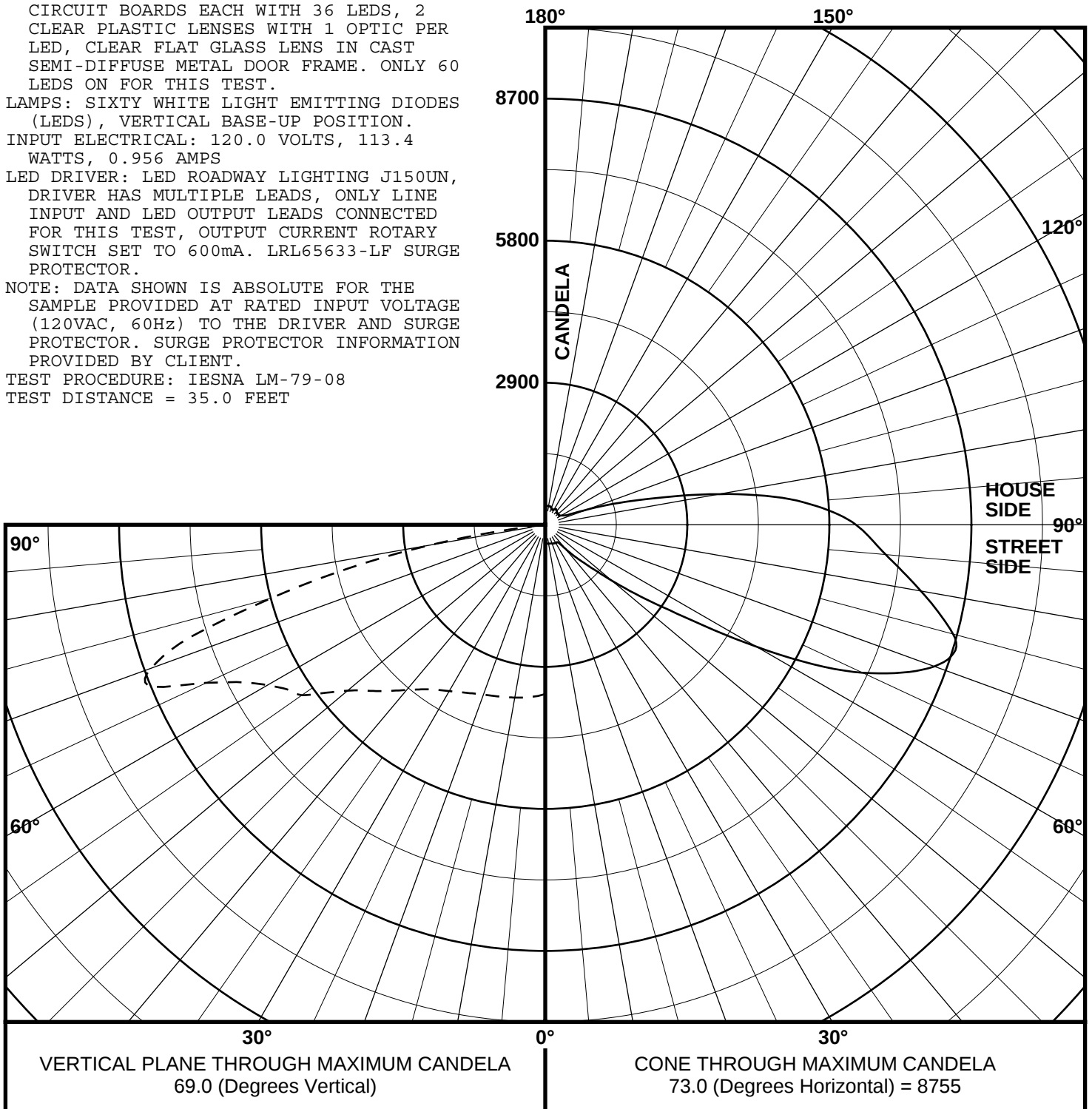
CheckedM.KLOPF.....

ApprovedR.BEATTIE.....
Lighting Engineer



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CATALOG NUMBER: NXT 60M 0 X 2ES 6 XX 3
XX X XX X
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TEST PROCEDURE: IESNA LM-79-08
TEST DISTANCE = 35.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

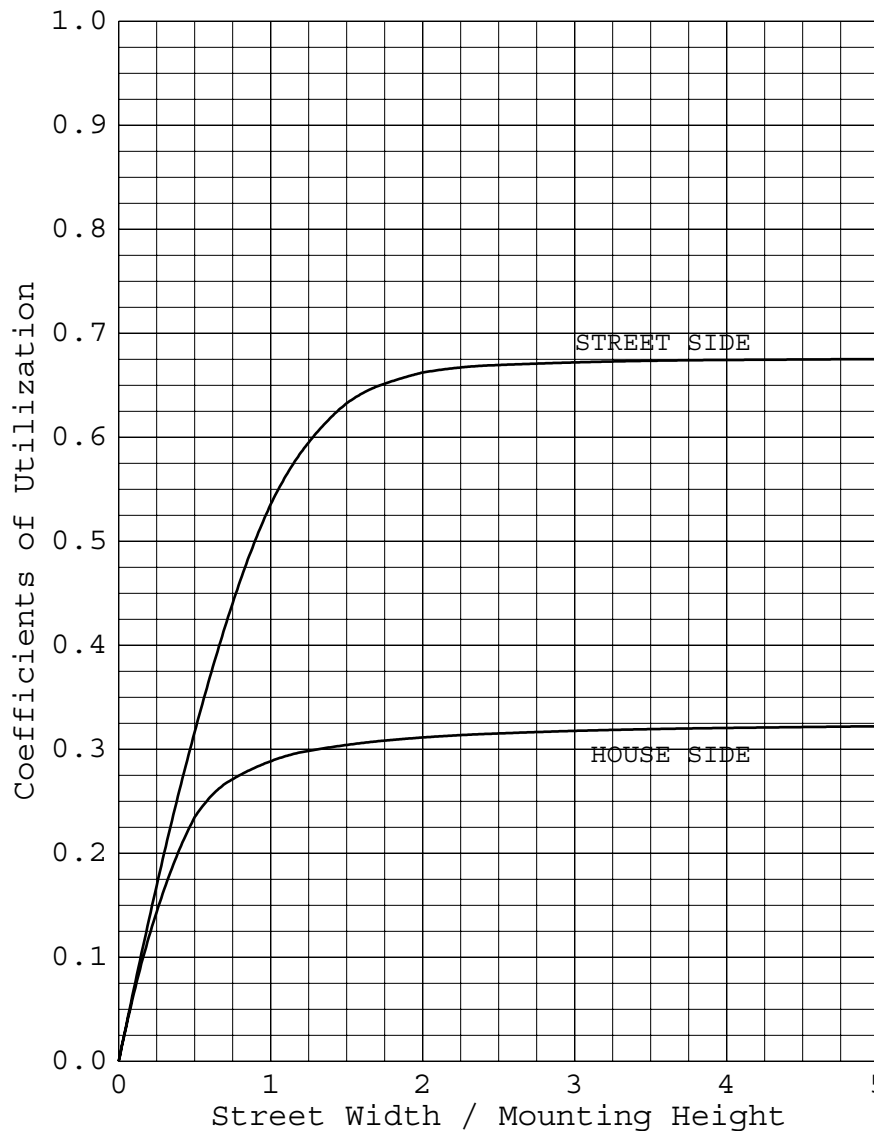




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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	8659	67.6
DOWNWARD HOUSE SIDE	4145	32.4
DOWNWARD TOTAL	12804	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	12804	100.0

EFFICACY = 112.9 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	8659.	67.6	
FL (0- 30)	1544.3	12.1	
FM (30- 60)	4396.4	34.3	
FH (60- 80)	2645.4	20.7	G2
FVH(80- 90)	72.6	0.6	G1
BACK LIGHT	4145.	32.4	
BL (0- 30)	1099.5	8.6	B3
BM (30- 60)	2030.8	15.9	B2
BH (60- 80)	980.9	7.7	B2 G2
BVH(80- 90)	33.6	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	12804.	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	LATERAL ANGLE										
		SIDE	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	73.0	75.0
	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	5.	5.	5.	4.	3.	2.	3.	5.	7.	7.	6.
	85.0	27.	28.	33.	33.	22.	21.	21.	24.	35.	37.	23.
V	82.5	65.	68.	86.	79.	59.	72.	72.	121.	712.	754.	424.
E	80.0	113.	122.	154.	118.	108.	132.	143.	380.	2390.	2488.	1767.
R	77.5	157.	165.	198.	162.	168.	183.	242.	1135.	4130.	4355.	3464.
T	75.0	188.	200.	229.	228.	227.	262.	421.	2899.	5790.	5995.	4708.
I	72.5	246.	259.	283.	297.	293.	411.	1102.	4907.	7547.	7633.	5904.
C	70.0	333.	345.	360.	378.	378.	783.	2383.	6670.	8560.	8457.	6756.
A	69.0<<	372.	385.	397.	419.	432.	1064.	2936.	7145.	8755.	8621.	6977.
L	67.5	433.	449.	463.	485.	594.	1631.	3700.	7386.	8643.	8523.	7116.
	65.0	560.	582.	628.	745.	1206.	2658.	4605.	7018.	7637.	7621.	6762.
A	62.5	854.	900.	1012.	1276.	1942.	3316.	4859.	6533.	6966.	6922.	6323.
N	60.0	1296.	1338.	1462.	1788.	2367.	3498.	4803.	6193.	6546.	6504.	6098.
G	57.5	1658.	1676.	1776.	2057.	2553.	3529.	4749.	5988.	6251.	6209.	5957.
L	55.0	1896.	1906.	1994.	2243.	2717.	3550.	4684.	5889.	6065.	6002.	5796.
E	52.5	2107.	2081.	2163.	2410.	2887.	3588.	4579.	5449.	5629.	5625.	5603.
	50.0	2241.	2228.	2324.	2589.	3051.	3658.	4502.	5121.	5267.	5283.	5364.
	47.5	2391.	2379.	2491.	2749.	3198.	3739.	4420.	4855.	5006.	5036.	5155.
	45.0	2542.	2533.	2665.	2917.	3329.	3797.	4291.	4605.	4802.	4845.	4964.
	42.5	2714.	2704.	2858.	3143.	3483.	3853.	4195.	4396.	4594.	4637.	4778.
	40.0	2984.	2983.	3155.	3389.	3641.	3919.	4081.	4217.	4404.	4446.	4573.
	37.5	3353.	3344.	3462.	3601.	3768.	3948.	3955.	4065.	4238.	4279.	4386.
	35.0	3643.	3627.	3695.	3771.	3860.	3888.	3834.	3936.	4101.	4143.	4209.
	30.0	3933.	3906.	3920.	3917.	3817.	3652.	3656.	3797.	3923.	3943.	3945.
	25.0	3877.	3835.	3781.	3685.	3587.	3539.	3605.	3726.	3786.	3785.	3732.
	20.0	3602.	3575.	3558.	3539.	3530.	3577.	3645.	3703.	3689.	3676.	3588.
	15.0	3596.	3584.	3587.	3609.	3625.	3663.	3695.	3677.	3629.	3612.	3521.
	10.0	3704.	3694.	3692.	3706.	3708.	3703.	3674.	3631.	3583.	3570.	3494.
	5.0	3677.	3668.	3652.	3651.	3628.	3615.	3591.	3561.	3530.	3524.	3485.
	0.0	3455.	3455.	3455.	3455.	3455.	3455.	3455.	3455.	3455.	3455.	3455.
										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	7.	6.	2.	2.	1.	1.	0.	0.	0.	0.	0.
	85.0	22.	20.	13.	10.	8.	10.	17.	25.	19.	5.	2.
V	82.5	420.	329.	48.	43.	38.	55.	72.	82.	96.	87.	85.
E	80.0	1541.	1188.	135.	99.	86.	113.	150.	166.	198.	211.	214.
R	77.5	2966.	2282.	293.	162.	143.	172.	223.	261.	329.	343.	348.
T	75.0	4167.	3252.	583.	236.	209.	228.	280.	304.	416.	459.	463.
I	72.5	5367.	4435.	1096.	326.	271.	278.	321.	316.	442.	477.	487.
C	70.0	6155.	5142.	1708.	417.	322.	323.	364.	329.	398.	417.	419.
A	69.0<<	6344.	5291.	1931.	454.	342.	340.	383.	337.	387.	388.	386.
L	67.5	6447.	5382.	2217.	504.	372.	364.	411.	358.	382.	354.	353.
	65.0	6243.	5353.	2635.	581.	418.	408.	447.	404.	396.	355.	352.
A	62.5	6005.	5315.	3006.	697.	458.	456.	472.	462.	429.	389.	383.
N	60.0	5908.	5348.	3353.	884.	501.	504.	481.	504.	484.	437.	427.
G	57.5	5866.	5431.	3662.	1184.	554.	549.	499.	528.	528.	482.	473.
L	55.0	5753.	5416.	3888.	1547.	627.	589.	533.	542.	557.	524.	511.
E	52.5	5545.	5223.	3915.	1918.	740.	626.	568.	571.	590.	552.	539.
	50.0	5337.	5059.	3931.	2249.	918.	666.	607.	603.	617.	582.	573.
	47.5	5141.	4918.	3943.	2504.	1148.	715.	649.	639.	629.	605.	601.
	45.0	4941.	4764.	3910.	2680.	1395.	815.	698.	675.	658.	640.	639.
	42.5	4745.	4587.	3849.	2784.	1624.	975.	756.	712.	695.	683.	684.
	40.0	4540.	4398.	3765.	2848.	1817.	1149.	858.	757.	730.	718.	716.
	37.5	4354.	4213.	3664.	2881.	1980.	1317.	997.	845.	783.	758.	757.
	35.0	4168.	4039.	3570.	2900.	2123.	1486.	1142.	972.	891.	858.	858.
	30.0	3882.	3752.	3390.	2913.	2374.	1855.	1488.	1268.	1156.	1102.	1089.
	25.0	3655.	3540.	3261.	2944.	2584.	2227.	1932.	1695.	1550.	1474.	1466.
	20.0	3518.	3424.	3213.	3004.	2776.	2553.	2353.	2175.	2056.	1988.	1977.
	15.0	3464.	3391.	3234.	3083.	2947.	2809.	2697.	2594.	2519.	2487.	2467.
	10.0	3453.	3402.	3296.	3197.	3109.	3027.	2959.	2904.	2874.	2862.	2846.
	5.0	3463.	3437.	3385.	3333.	3283.	3240.	3202.	3173.	3154.	3150.	3143.
	0.0	3455.	3455.	3455.	3455.	3455.	3455.	3455.	3455.	3455.	3455.	3455.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	82
5- 10	243
10- 15	391
15- 20	523
20- 25	642
25- 30	762
30- 35	874
35- 40	968
40- 45	1045
45- 50	1119
50- 55	1189
55- 60	1232
60- 65	1212
65- 70	1136
70- 75	845
75- 80	434
80- 85	103
85- 90	4
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	325
0- 20	1239
0- 30	2644
0- 40	4487
0- 50	6650
0- 60	9071
0- 70	11419
0- 80	12697
0- 90	12804
0-100	12804
0-110	12804
0-120	12804
0-130	12804
0-140	12804
0-150	12804
0-160	12804
0-170	12804
0-180	12804



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