

REPORT NUMBER: ITL85762

ISSUE DATE: 10/13/15

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 60M 0 X 2ES 3 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, 68.8 WATTS, 0.580 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 350mA. 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: 8358

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85777: 3749K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85777: 73

LED DC DRIVE CURRENT (mA): 350 (PROVIDED BY CLIENT)

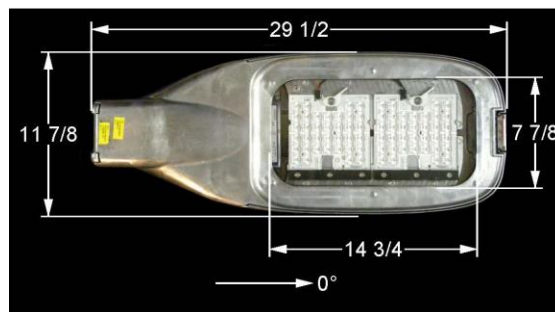
POWER FACTOR: 98.9 %

BUG RATING: B2 U0 G2

LUMINAIRE EFFICACY: 121.5 lm/W

IES CLASSIFICATION: Medium, Type II

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

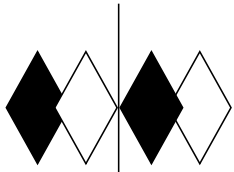


FLUX DISTRIBUTION

LUMENS	DOWNWARD	UPWARD	TOTALS
HOUSE SIDE	2703	0	2703
STREET SIDE	5655	0	5655
TOTALS	8358	0	8358

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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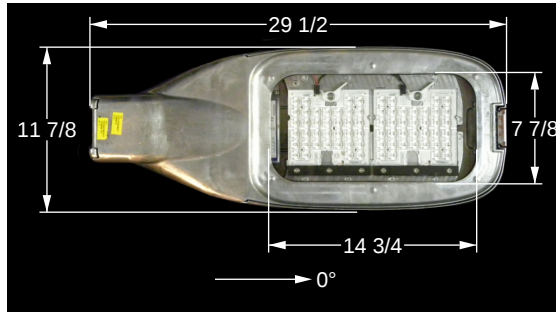
NVLAP
NVLAP LAB CODE: 200925-0

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

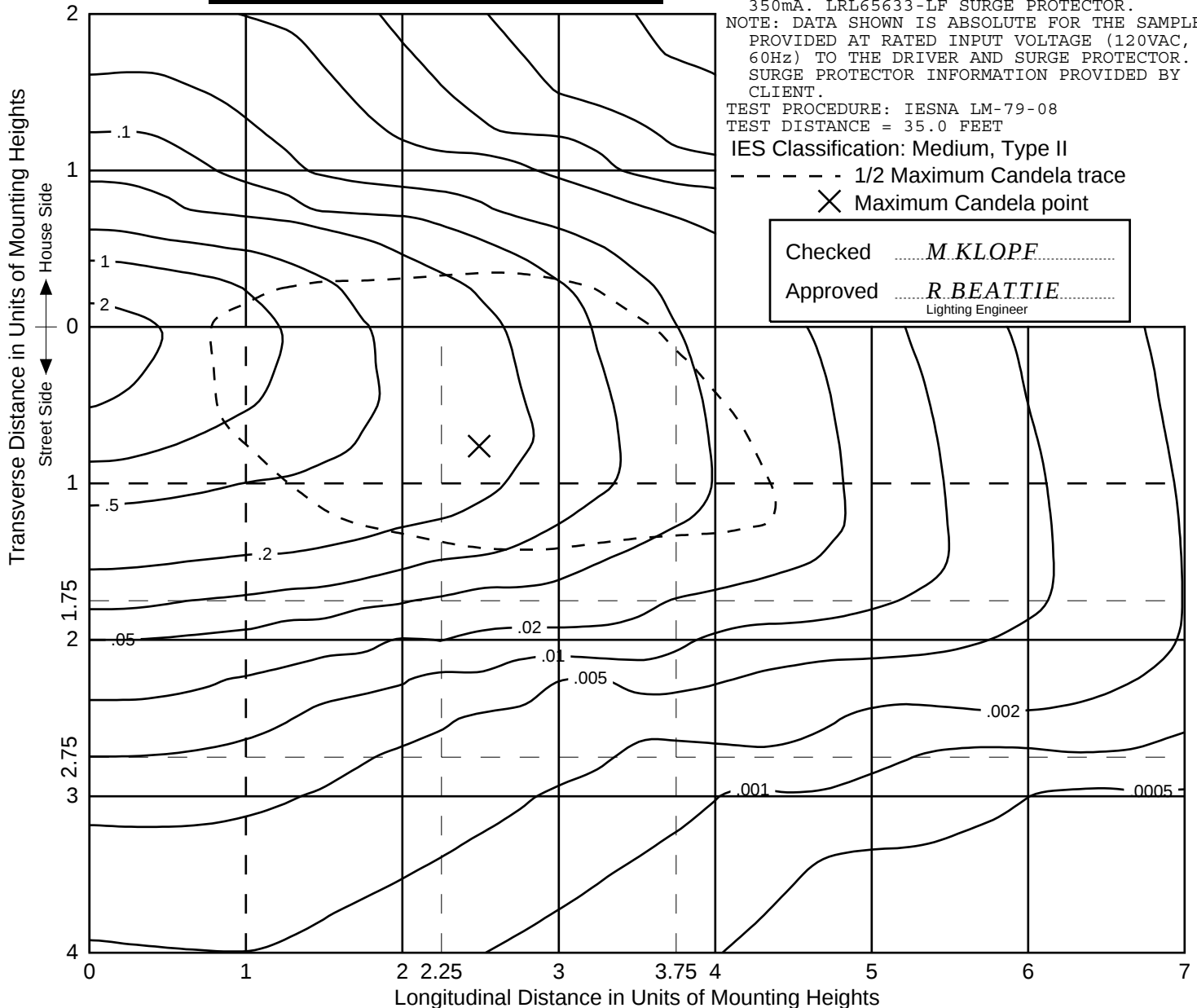
IES Classification: Medium, Type II

--- 1/2 Maximum Candela trace

X Maximum Candela point

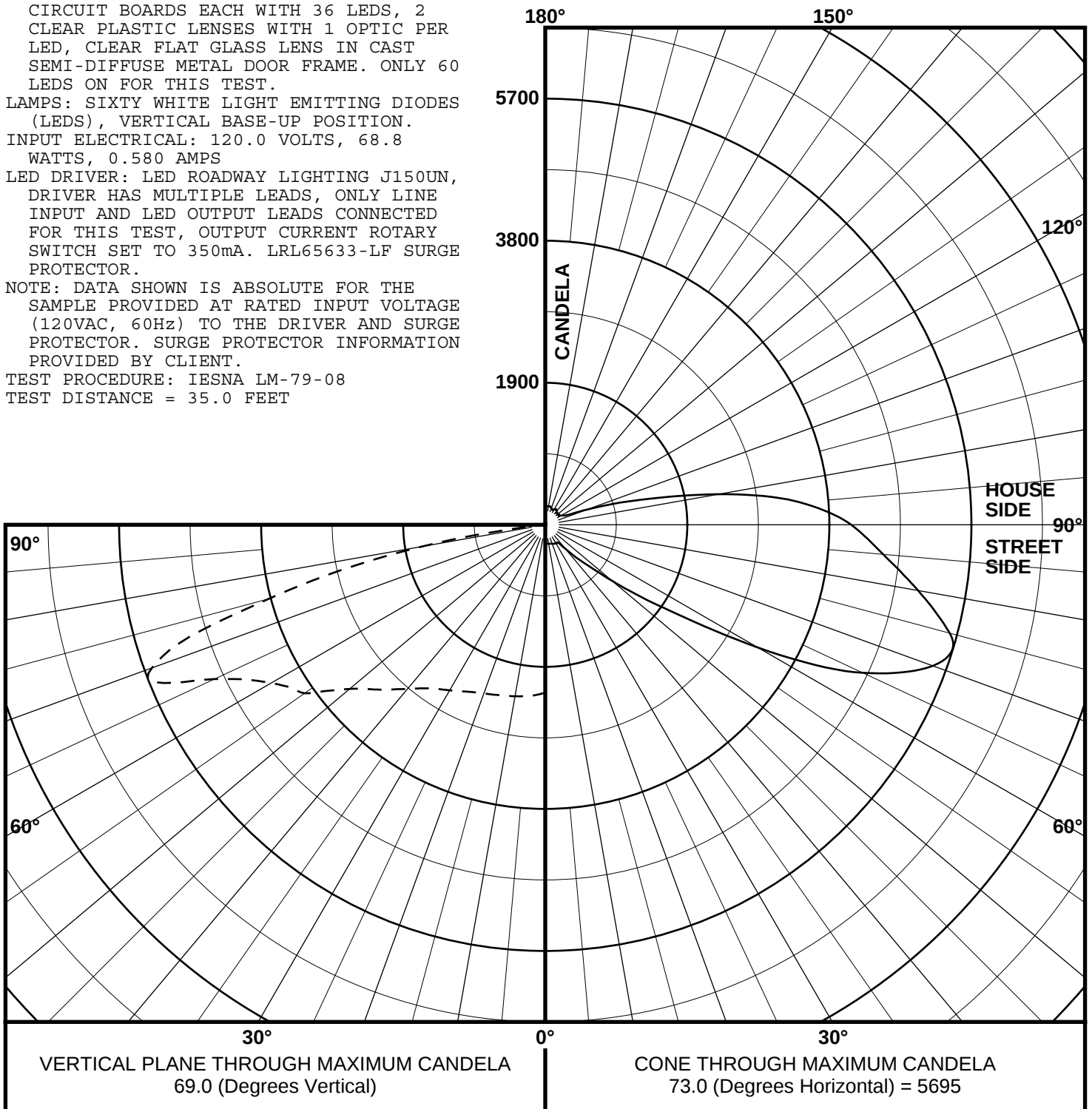
CheckedM.KLOPF.....

ApprovedR.BEATTIE.....
Lighting Engineer



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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

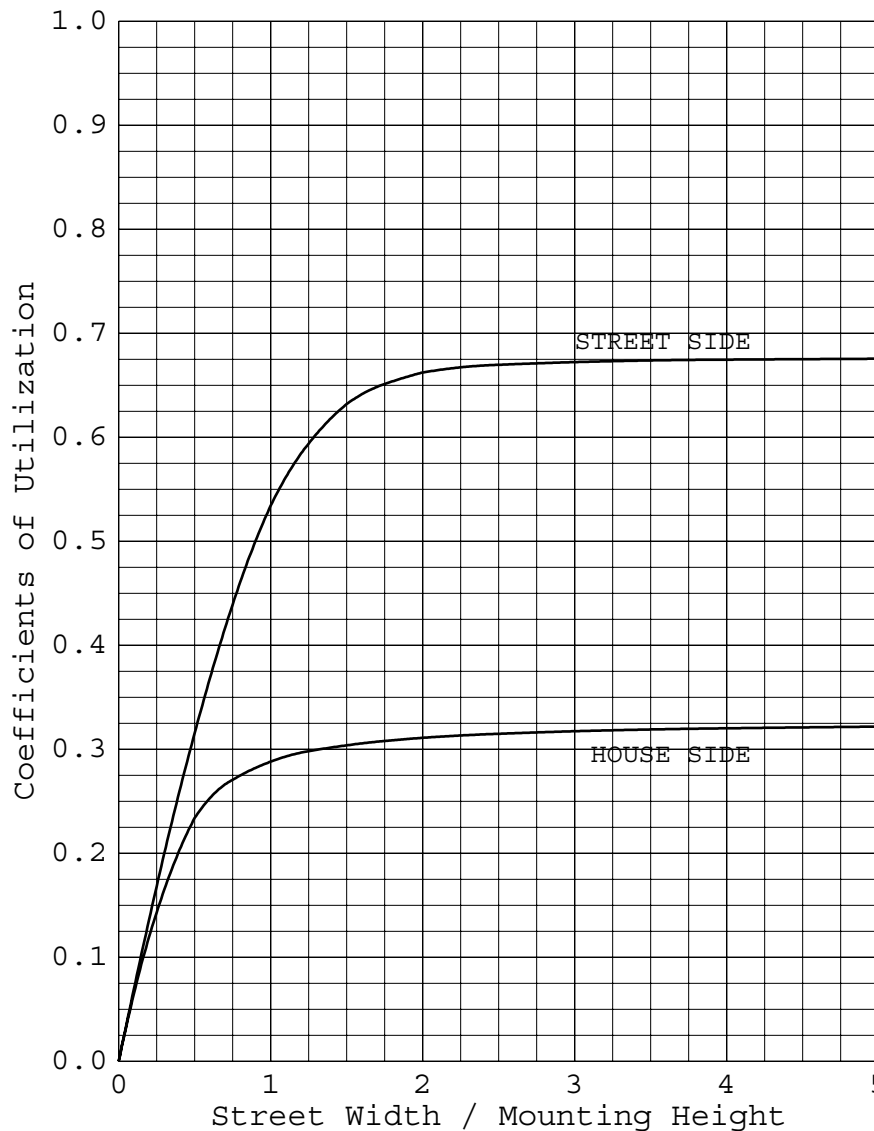




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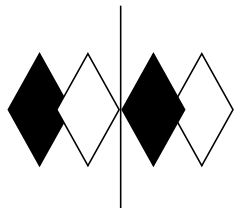
COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	5655	67.7
DOWNWARD HOUSE SIDE	2703	32.3
DOWNWARD TOTAL	8358	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	8358	100.0

EFFICACY = 121.5 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	5655.	67.7	
FL (0- 30)	1007.1	12.1	
FM (30- 60)	2863.9	34.3	
FH (60- 80)	1733.5	20.7	G1
FVH(80- 90)	50.3	0.6	G1
BACK LIGHT	2703.	32.3	
BL (0- 30)	716.7	8.6	B2
BM (30- 60)	1325.2	15.9	B2
BH (60- 80)	638.8	7.6	B2 G2
BVH(80- 90)	22.1	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	8358.	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										
	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.	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.	3.	2.	2.	2.	3.	5.	5.	6.
85.0	17.	18.	21.	21.	15.	14.	13.	16.	21.	20.	15.
V 82.5	41.	43.	56.	52.	39.	47.	47.	83.	525.	513.	314.
E 80.0	76.	79.	100.	77.	72.	87.	93.	268.	1684.	1745.	1243.
R 77.5	103.	107.	129.	106.	112.	120.	155.	808.	2791.	2927.	2321.
T 75.0	124.	130.	149.	149.	150.	169.	295.	1986.	3827.	3990.	3104.
I 72.5	164.	170.	186.	195.	194.	265.	749.	3276.	4994.	5008.	3871.
C 70.0	224.	227.	237.	252.	252.	508.	1588.	4406.	5596.	5513.	4406.
A 69.0<<	249.	253.	262.	280.	291.	694.	1943.	4685.	5695.	5601.	4538.
L 67.5	290.	295.	305.	330.	408.	1097.	2431.	4805.	5529.	5473.	4598.
65.0	377.	384.	416.	525.	823.	1730.	3008.	4549.	4885.	4881.	4346.
A 62.5	579.	594.	674.	867.	1292.	2162.	3164.	4241.	4488.	4461.	4086.
N 60.0	868.	878.	968.	1179.	1550.	2271.	3126.	4022.	4232.	4204.	3953.
G 57.5	1095.	1098.	1168.	1347.	1669.	2292.	3095.	3889.	4046.	4017.	3864.
L 55.0	1247.	1246.	1306.	1461.	1777.	2309.	3056.	3821.	3928.	3887.	3760.
E 52.5	1371.	1362.	1413.	1569.	1887.	2335.	2985.	3540.	3644.	3651.	3635.
50.0	1466.	1458.	1517.	1686.	1996.	2383.	2934.	3328.	3415.	3432.	3481.
47.5	1562.	1556.	1627.	1793.	2096.	2439.	2880.	3158.	3250.	3274.	3347.
45.0	1659.	1650.	1741.	1907.	2181.	2477.	2794.	2994.	3119.	3150.	3224.
42.5	1771.	1762.	1877.	2056.	2281.	2514.	2731.	2860.	2985.	3022.	3105.
40.0	1959.	1950.	2077.	2215.	2383.	2557.	2659.	2745.	2865.	2898.	2973.
37.5	2198.	2181.	2270.	2351.	2463.	2573.	2576.	2647.	2758.	2788.	2851.
35.0	2385.	2364.	2420.	2462.	2523.	2530.	2499.	2567.	2672.	2696.	2737.
30.0	2570.	2550.	2559.	2554.	2478.	2386.	2389.	2481.	2556.	2566.	2562.
25.0	2525.	2494.	2461.	2399.	2343.	2316.	2358.	2436.	2463.	2462.	2425.
20.0	2353.	2340.	2329.	2315.	2310.	2341.	2383.	2415.	2399.	2392.	2334.
15.0	2354.	2347.	2347.	2361.	2368.	2392.	2409.	2393.	2360.	2350.	2291.
10.0	2417.	2413.	2408.	2417.	2415.	2410.	2391.	2362.	2329.	2321.	2272.
5.0	2393.	2386.	2376.	2373.	2360.	2351.	2334.	2316.	2295.	2291.	2267.
0.0	2246.	2246.	2246.	2246.	2246.	2246.	2246.	2246.	2246.	2246.	2246.

||
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	5.	5.	3.	2.	1.	1.	0.	0.	0.	0.	0.
	85.0	15.	13.	9.	7.	6.	7.	10.	17.	11.	3.	1.
V	82.5	289.	209.	33.	28.	25.	34.	46.	55.	64.	59.	58.
E	80.0	1040.	773.	89.	67.	58.	72.	96.	110.	131.	138.	134.
R	77.5	1915.	1486.	194.	108.	95.	110.	146.	169.	217.	227.	220.
T	75.0	2681.	2117.	388.	154.	139.	147.	183.	198.	270.	300.	298.
I	72.5	3456.	2879.	728.	215.	179.	180.	210.	205.	287.	311.	316.
C	70.0	3970.	3328.	1123.	271.	212.	211.	239.	215.	260.	269.	273.
A	69.0<<	4093.	3427.	1265.	295.	225.	222.	251.	220.	253.	250.	253.
L	67.5	4156.	3476.	1454.	328.	245.	237.	268.	234.	249.	230.	230.
	65.0	4030.	3462.	1732.	380.	275.	266.	292.	264.	259.	232.	229.
A	62.5	3884.	3450.	1974.	457.	300.	297.	308.	303.	281.	255.	249.
N	60.0	3831.	3468.	2196.	587.	329.	328.	316.	330.	317.	287.	277.
G	57.5	3805.	3526.	2392.	789.	363.	357.	328.	346.	346.	316.	307.
L	55.0	3730.	3520.	2542.	1028.	412.	385.	349.	355.	366.	342.	333.
E	52.5	3602.	3394.	2554.	1268.	488.	409.	371.	375.	388.	361.	353.
	50.0	3466.	3286.	2561.	1480.	604.	436.	397.	396.	403.	380.	376.
	47.5	3340.	3196.	2567.	1635.	753.	471.	425.	421.	412.	395.	394.
	45.0	3213.	3097.	2542.	1746.	912.	537.	456.	442.	431.	418.	418.
	42.5	3086.	2983.	2505.	1813.	1060.	641.	494.	467.	456.	447.	448.
	40.0	2955.	2862.	2450.	1855.	1185.	755.	564.	497.	480.	470.	470.
	37.5	2827.	2735.	2384.	1875.	1289.	864.	653.	555.	513.	496.	496.
	35.0	2708.	2623.	2322.	1887.	1383.	974.	749.	639.	585.	562.	562.
	30.0	2520.	2439.	2206.	1897.	1547.	1219.	975.	835.	755.	723.	722.
	25.0	2374.	2302.	2125.	1918.	1688.	1457.	1263.	1106.	1012.	971.	956.
	20.0	2286.	2228.	2094.	1957.	1810.	1662.	1535.	1417.	1340.	1307.	1288.
	15.0	2252.	2205.	2106.	2010.	1919.	1829.	1756.	1688.	1640.	1614.	1605.
	10.0	2245.	2212.	2145.	2084.	2024.	1971.	1933.	1894.	1871.	1860.	1854.
	5.0	2252.	2235.	2201.	2171.	2136.	2108.	2082.	2068.	2057.	2054.	2047.
	0.0	2246.	2246.	2246.	2246.	2246.	2246.	2246.	2246.	2246.	2246.	2246.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	54
5- 10	158
10- 15	255
15- 20	341
20- 25	419
25- 30	497
30- 35	570
35- 40	632
40- 45	681
45- 50	729
50- 55	775
55- 60	802
60- 65	789
65- 70	739
70- 75	555
75- 80	289
80- 85	70
85- 90	2
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	212
0- 20	808
0- 30	1724
0- 40	2926
0- 50	4336
0- 60	5913
0- 70	7441
0- 80	8285
0- 90	8358
0-100	8358
0-110	8358
0-120	8358
0-130	8358
0-140	8358
0-150	8358
0-160	8358
0-170	8358
0-180	8358



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ADDRESS: 115 CHAIN LAKE DRIVE
SUITE 201
HALIFAX, NOVA SCOTIA, CANADA B3S 1B3

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