

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: ITL85788

ISSUE DATE: 10/12/15

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 48M 0 X 2EM 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, 105.7 WATTS, 0.910 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: 11806

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85791: 3761K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85791: 73

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

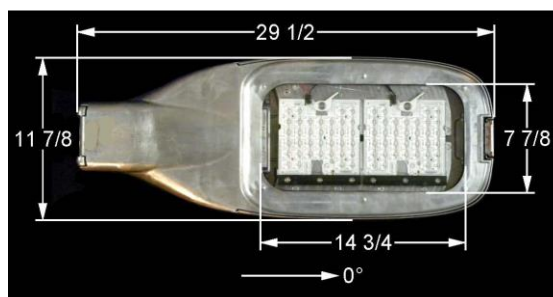
POWER FACTOR: 96.8 %

BUG RATING: B3 U0 G2

LUMINAIRE EFFICACY: 111.7 lm/W

IES CLASSIFICATION: Short, Type II

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



FLUX DISTRIBUTION

LUMENS	DOWNWARD	UPWARD	TOTALS
HOUSE SIDE	3507	0	3507
STREET SIDE	8300	0	8300
TOTALS	11806	0	11806

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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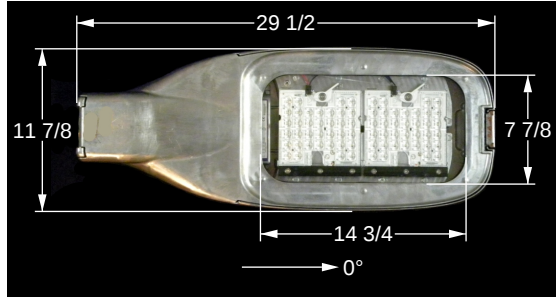
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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 30 foot mounting height.



REPORT NUMBER: ITL85788

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PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 48M 0 X 2EM 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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TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

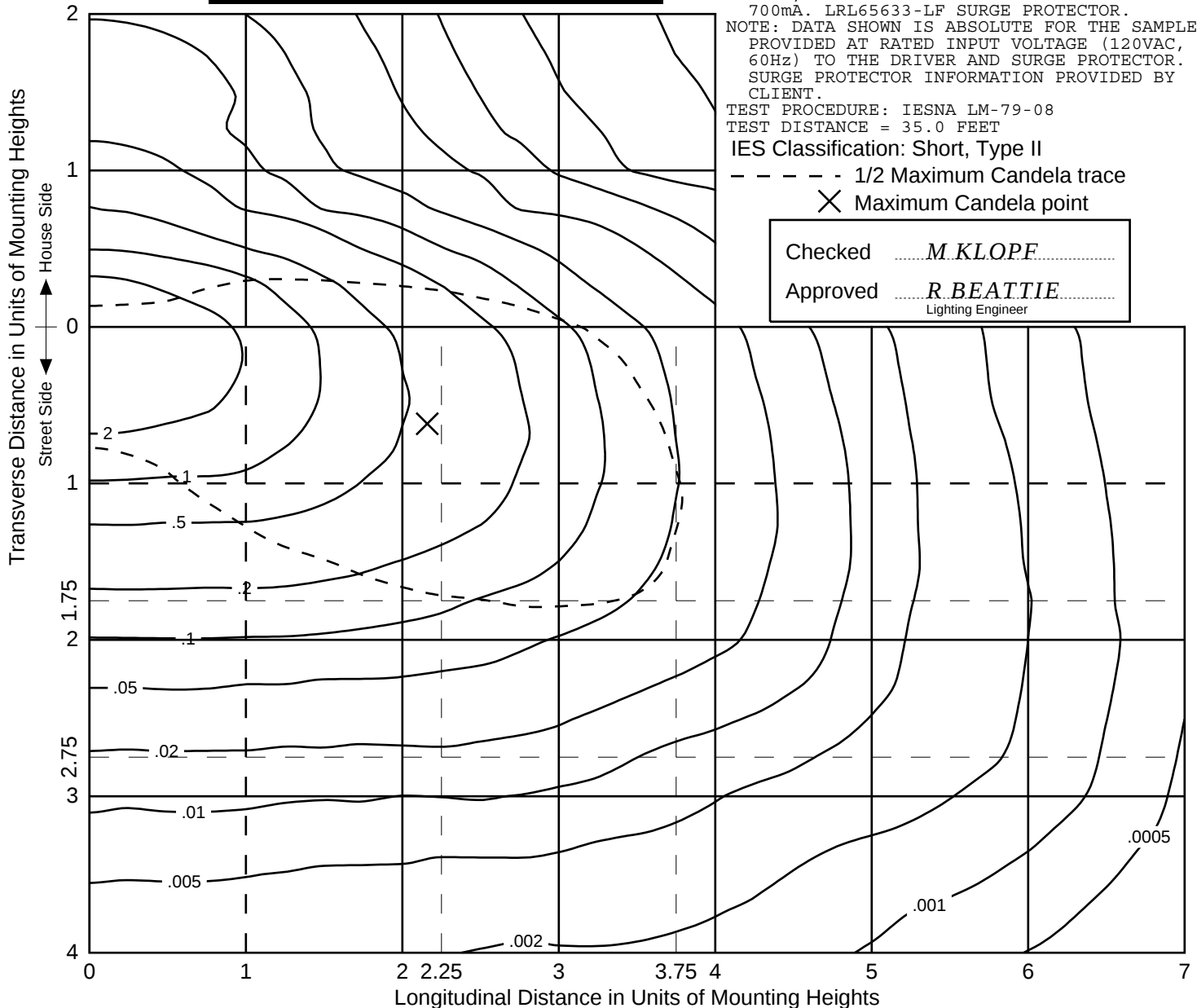
IES Classification: Short, Type II

--- 1/2 Maximum Candela trace

X Maximum Candela point

CheckedM.KLOPF.....

ApprovedR.BEATTIE.....
Lighting Engineer



REPORT NUMBER: ITL85788
ISSUE DATE: 10/12/15 PAGE: 3 OF 9
PREPARED FOR: LED ROADWAY LIGHTING LTD.
CATALOG NUMBER: NXT 48M 0 X 2EM 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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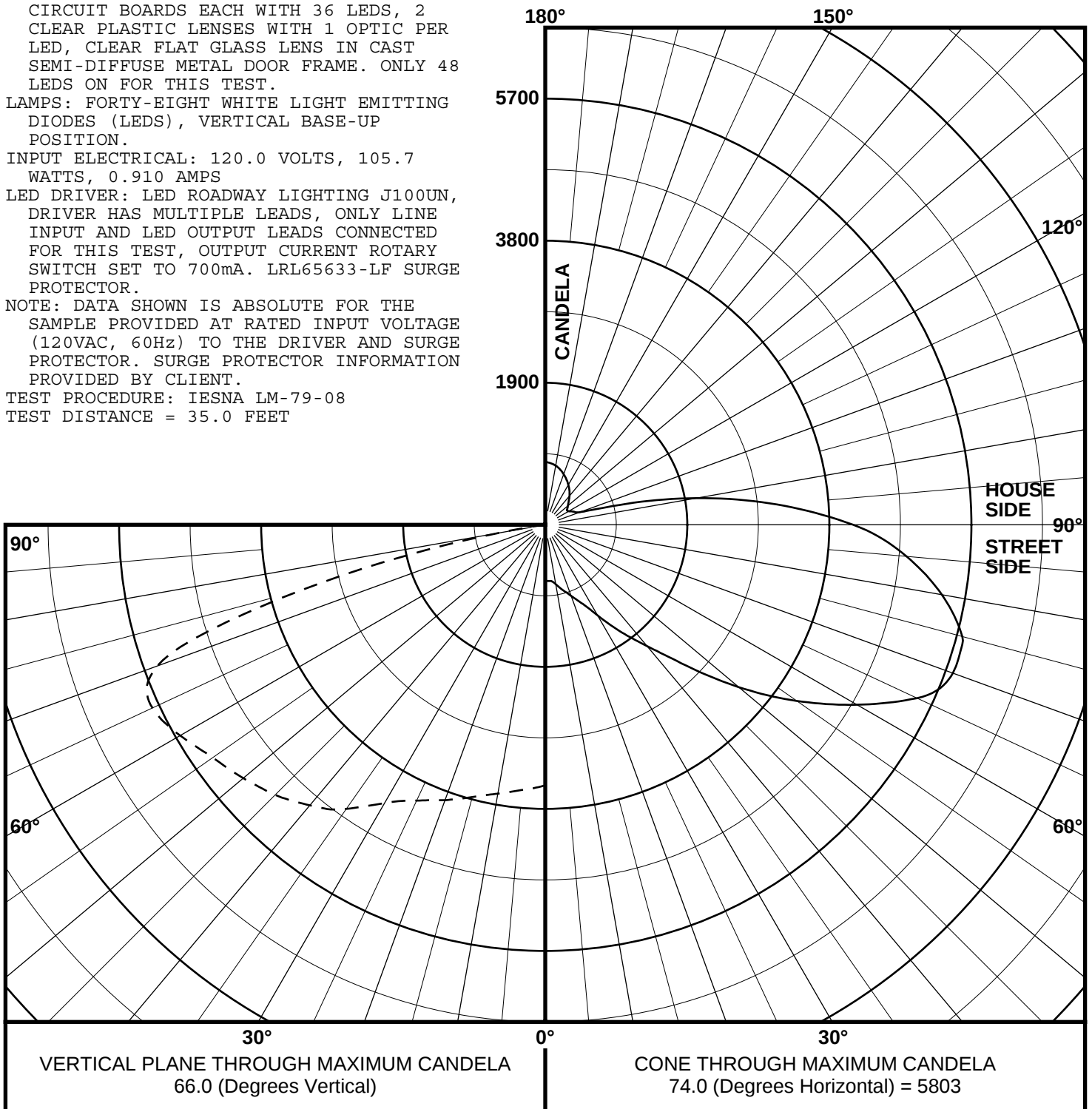
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TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA





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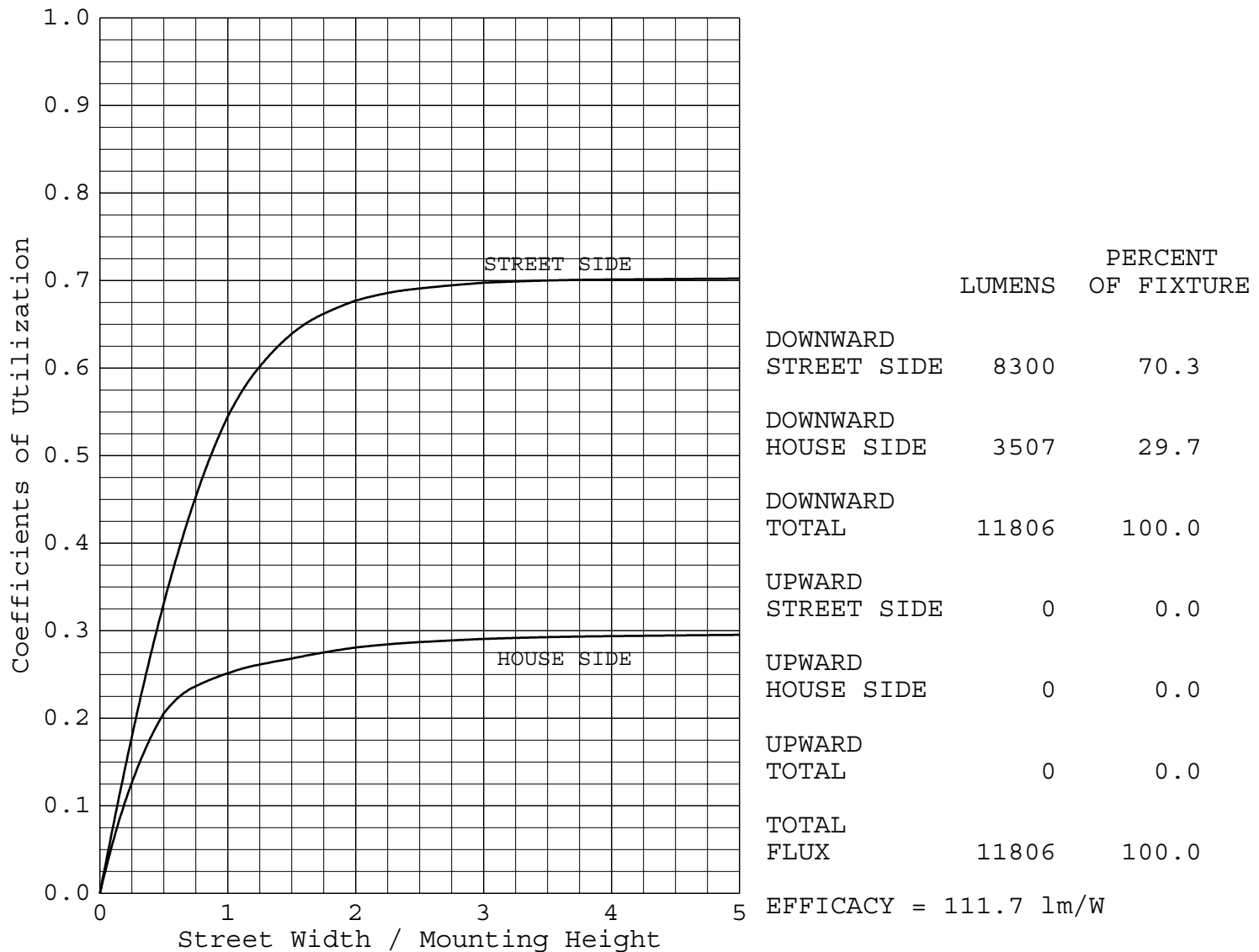
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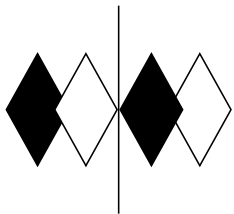
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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



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	8300.	70.3	
FL (0- 30)	1634.0	13.8	
FM (30- 60)	4353.5	36.9	
FH (60- 80)	2276.1	19.3	G2
FVH(80- 90)	36.3	0.3	G1
BACK LIGHT	3507.	29.7	
BL (0- 30)	1047.7	8.9	B3
BM (30- 60)	1748.5	14.8	B2
BH (60- 80)	691.0	5.9	B2 G2
BVH(80- 90)	19.4	0.2	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	11806.	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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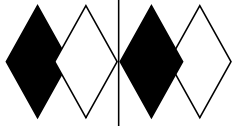
PAGE: 6 OF 9

CANDELA TABULATION

	STREET SIDE										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	74.0	75.0	85.0
	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	2.	2.	2.	1.	1.	1.	3.	4.	4.	3.
	85.0	21.	22.	25.	22.	19.	16.	14.	15.	13.	11.
V	82.5	51.	55.	57.	57.	61.	92.	112.	180.	136.	67.
E	80.0	93.	94.	106.	109.	120.	253.	378.	806.	652.	393.
R	77.5	142.	143.	159.	173.	235.	513.	942.	2106.	1923.	1240.
T	75.0	198.	199.	226.	268.	438.	972.	1878.	3386.	3374.	2448.
I	72.5	288.	277.	339.	414.	704.	1495.	2710.	4531.	4718.	3590.
C	70.0	403.	397.	475.	645.	1090.	1990.	3331.	5157.	5523.	4404.
A	67.5	613.	614.	743.	974.	1529.	2425.	3841.	5423.	5770.	4753.
L	66.0<<	749.	754.	903.	1158.	1736.	2662.	4107.	5486.	5803.	4849.
	65.0	838.	843.	997.	1262.	1856.	2816.	4264.	5511.	5797.	4891.
A	62.5	1042.	1049.	1204.	1482.	2129.	3179.	4565.	5520.	5737.	4958.
N	60.0	1230.	1238.	1387.	1676.	2372.	3490.	4740.	5488.	5639.	4981.
G	57.5	1395.	1416.	1572.	1873.	2629.	3751.	4833.	5429.	5530.	4987.
L	55.0	1588.	1607.	1768.	2080.	2839.	3969.	4883.	5372.	5428.	4985.
E	52.5	1787.	1814.	1975.	2318.	3014.	4115.	4890.	5314.	5350.	4979.
	50.0	2006.	2043.	2186.	2497.	3161.	4174.	4867.	5247.	5273.	4962.
	47.5	2226.	2256.	2388.	2658.	3278.	4181.	4803.	5149.	5191.	4922.
	45.0	2415.	2446.	2555.	2807.	3353.	4139.	4717.	5035.	5110.	4848.
	42.5	2589.	2613.	2714.	2951.	3422.	4103.	4626.	4904.	5007.	4749.
	40.0	2754.	2770.	2866.	3096.	3515.	4067.	4512.	4790.	4899.	4631.
	37.5	2906.	2939.	3026.	3242.	3644.	4025.	4369.	4673.	4792.	4502.
	35.0	3080.	3112.	3185.	3390.	3756.	3970.	4241.	4530.	4638.	4339.
	30.0	3400.	3460.	3555.	3721.	3804.	3878.	4108.	4296.	4298.	3976.
	25.0	3633.	3695.	3711.	3731.	3773.	3957.	4142.	4150.	4070.	3764.
	20.0	3652.	3710.	3753.	3849.	3991.	4112.	4117.	4050.	3919.	3667.
	15.0	3995.	4053.	4062.	4074.	4085.	4073.	4022.	3933.	3770.	3610.
	10.0	3971.	4017.	4002.	3983.	3971.	3949.	3858.	3743.	3652.	3563.
	5.0	3738.	3778.	3760.	3724.	3698.	3663.	3621.	3595.	3560.	3523.
	0.0	3487.	3487.	3487.	3487.	3487.	3487.	3487.	3487.	3487.	3487.

||
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	3.	3.	2.	1.	1.	1.	0.	0.	0.	0.	0.
	85.0	10.	9.	7.	7.	6.	9.	18.	33.	33.	9.	2.
V	82.5	58.	38.	30.	27.	33.	56.	69.	89.	99.	84.	82.
E	80.0	344.	193.	74.	68.	73.	114.	140.	160.	185.	193.	215.
R	77.5	987.	535.	133.	115.	117.	162.	216.	246.	272.	305.	344.
T	75.0	1952.	1033.	214.	166.	169.	217.	277.	333.	368.	415.	502.
I	72.5	2870.	1674.	335.	221.	223.	277.	343.	402.	462.	501.	647.
C	70.0	3573.	2342.	553.	287.	276.	330.	416.	482.	554.	614.	688.
A	67.5	3971.	2873.	831.	368.	332.	404.	504.	597.	683.	728.	755.
L	66.0<<	4118.	3112.	1024.	417.	356.	444.	563.	670.	766.	827.	842.
	65.0	4197.	3244.	1164.	451.	367.	462.	610.	718.	811.	876.	891.
A	62.5	4355.	3516.	1514.	534.	391.	485.	702.	862.	923.	955.	961.
N	60.0	4461.	3721.	1838.	642.	447.	480.	670.	909.	1026.	1073.	1079.
G	57.5	4537.	3879.	2169.	793.	535.	486.	558.	774.	933.	987.	1004.
L	55.0	4592.	4008.	2468.	1006.	624.	538.	509.	568.	707.	763.	789.
E	52.5	4617.	4090.	2712.	1255.	698.	595.	564.	539.	548.	575.	583.
	50.0	4622.	4144.	2903.	1505.	790.	668.	642.	615.	603.	611.	611.
	47.5	4596.	4164.	3039.	1722.	924.	733.	703.	698.	706.	712.	710.
	45.0	4536.	4147.	3129.	1898.	1062.	796.	757.	756.	780.	805.	806.
	42.5	4455.	4105.	3188.	2040.	1211.	889.	806.	802.	815.	836.	840.
	40.0	4351.	4034.	3216.	2160.	1360.	1009.	872.	840.	845.	860.	864.
	37.5	4236.	3948.	3214.	2262.	1513.	1127.	968.	899.	879.	887.	891.
	35.0	4091.	3832.	3177.	2370.	1673.	1250.	1073.	985.	937.	932.	936.
	30.0	3771.	3574.	3120.	2587.	2005.	1559.	1295.	1166.	1100.	1084.	1086.
	25.0	3607.	3461.	3149.	2786.	2350.	1944.	1634.	1447.	1331.	1284.	1292.
	20.0	3555.	3449.	3219.	2972.	2676.	2387.	2104.	1884.	1746.	1699.	1701.
	15.0	3534.	3463.	3304.	3129.	2957.	2775.	2596.	2441.	2320.	2275.	2283.
	10.0	3518.	3477.	3382.	3279.	3167.	3082.	2987.	2905.	2840.	2818.	2838.
	5.0	3501.	3482.	3441.	3394.	3349.	3322.	3285.	3256.	3229.	3221.	3246.
	0.0	3487.	3487.	3487.	3487.	3487.	3487.	3487.	3487.	3487.	3487.	3487.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	83
5- 10	250
10- 15	408
15- 20	541
20- 25	648
25- 30	751
30- 35	850
35- 40	943
40- 45	1024
45- 50	1081
50- 55	1098
55- 60	1107
60- 65	1069
65- 70	935
70- 75	668
75- 80	294
80- 85	53
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	333
0- 20	1282
0- 30	2682
0- 40	4475
0- 50	6579
0- 60	8784
0- 70	10788
0- 80	11751
0- 90	11806
0-100	11806
0-110	11806
0-120	11806
0-130	11806
0-140	11806
0-150	11806
0-160	11806
0-170	11806
0-180	11806



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PAGE: 9 OF 9

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HALIFAX, NOVA SCOTIA, CANADA B3S 1B3

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