

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: ITL85004

PAGE: 1 OF 9

ISSUE DATE: 06/25/15

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 36S 0 X 2ES 7 XX 3 XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY PAINTED INTERIOR FINISH, 1 WHITE CIRCUIT BOARD WITH 36 LEDS, 1 CLEAR PLASTIC LENS WITH 1 OPTIC PER LED, CLEAR FLAT GLASS LENS IN CAST GRAY PAINTED METAL DOOR FRAME.

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

INPUT ELECTRICAL: 120.0 VOLTS, 80.5 WATTS, 0.681 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 = 20.0 FEET

TOTAL LUMEN OUTPUT: 8527

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85006.PS: 3788K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85006.PS: 73

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

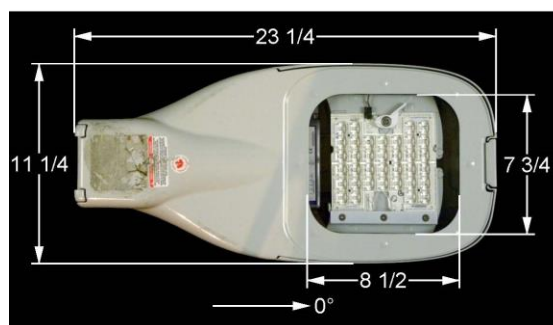
POWER FACTOR: 98.5

BUG RATING: B2 U0 G2

LUMINAIRE EFFICACY: 105.9

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	2857	0	2857
STREET SIDE	5670	0	5670
TOTALS	8527	0	8527

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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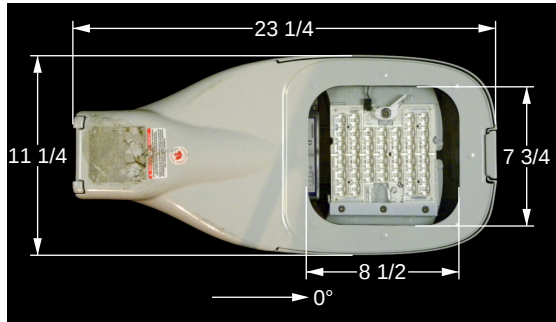
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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 30 foot mounting height.



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PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 36S 0 X 2ES 7 XX 3
XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY PAINTED INTERIOR FINISH, 1 WHITE CIRCUIT BOARD WITH 36 LEDs, 1 CLEAR PLASTIC LENS WITH 1 OPTIC PER LED, CLEAR FLAT GLASS LENS IN CAST GRAY PAINTED METAL DOOR FRAME.

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

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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 = 20.0 FEET

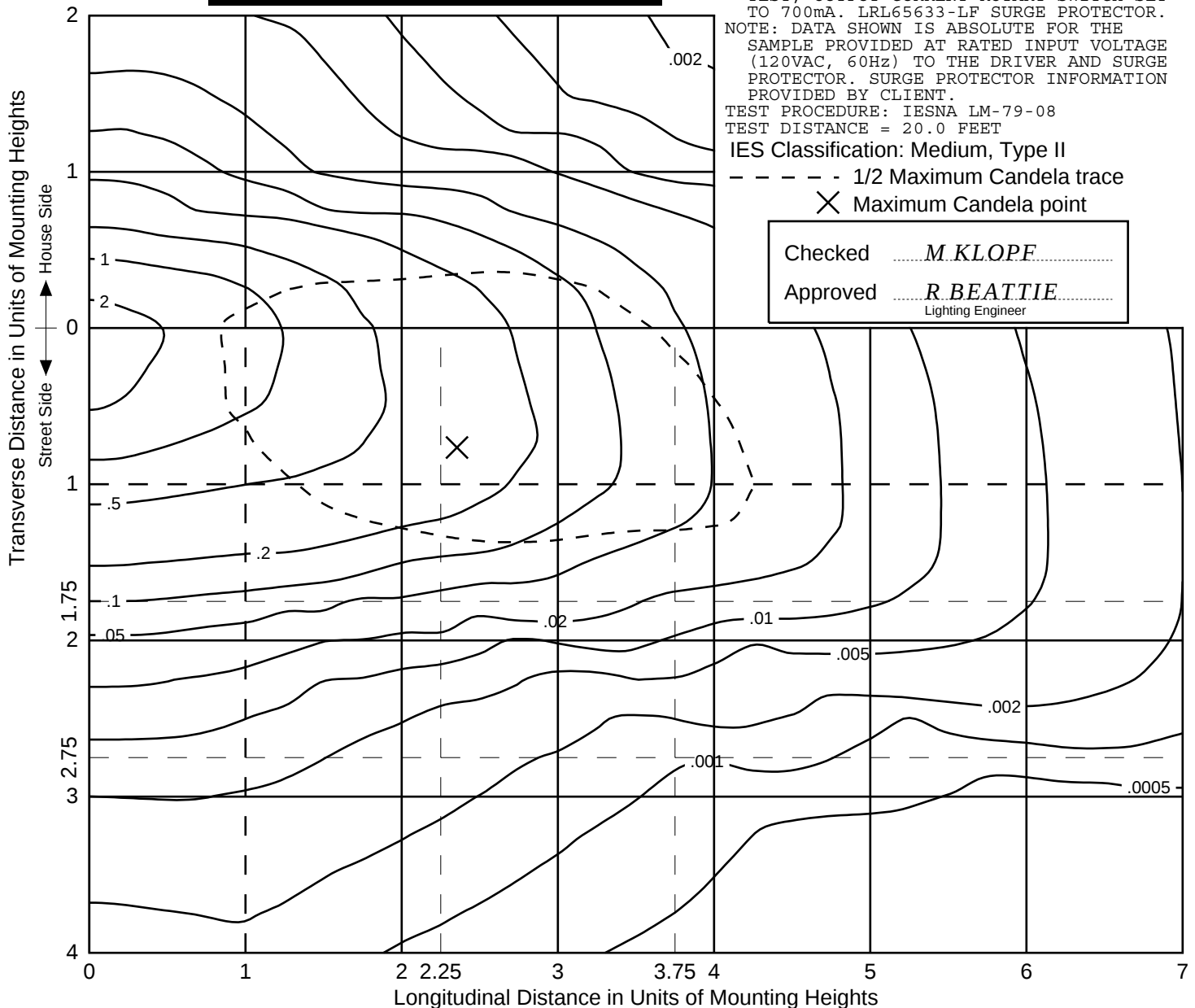
IES Classification: Medium, Type II

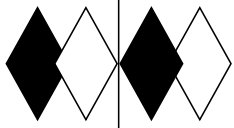
--- 1/2 Maximum Candela trace

X Maximum Candela point

CheckedM.KLOPF.....

ApprovedR.BEATTIE.....
Lighting Engineer





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PAGE: 3 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 36S 0 X 2ES 7 XX 3

XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY
PAINTED INTERIOR FINISH, 1 WHITE
CIRCUIT BOARD WITH 36 LEDS, 1 CLEAR
PLASTIC LENS WITH 1 OPTIC PER LED,
CLEAR FLAT GLASS LENS IN CAST GRAY
PAINTED METAL DOOR FRAME.

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

INPUT ELECTRICAL: 120.0 VOLTS, 80.5
WATTS, 0.681 AMPS

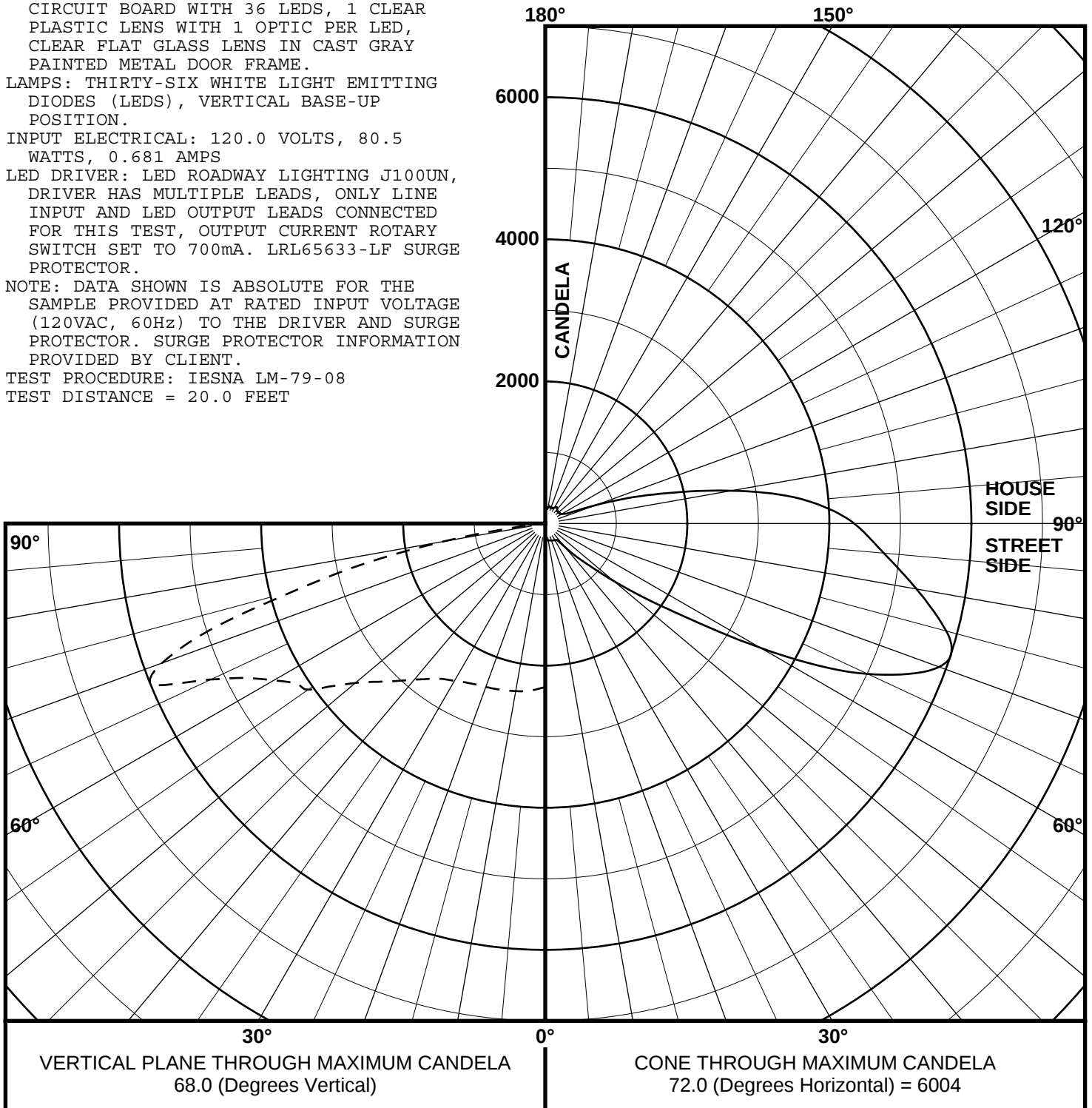
LED DRIVER: LED ROADWAY LIGHTING J100UN,
DRIVER HAS MULTIPLE LEADS, ONLY LINE
INPUT AND LED OUTPUT LEADS CONNECTED
FOR THIS TEST, OUTPUT CURRENT ROTARY
SWITCH SET TO 700mA. LRL65633-LF SURGE
PROTECTOR.

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 = 20.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

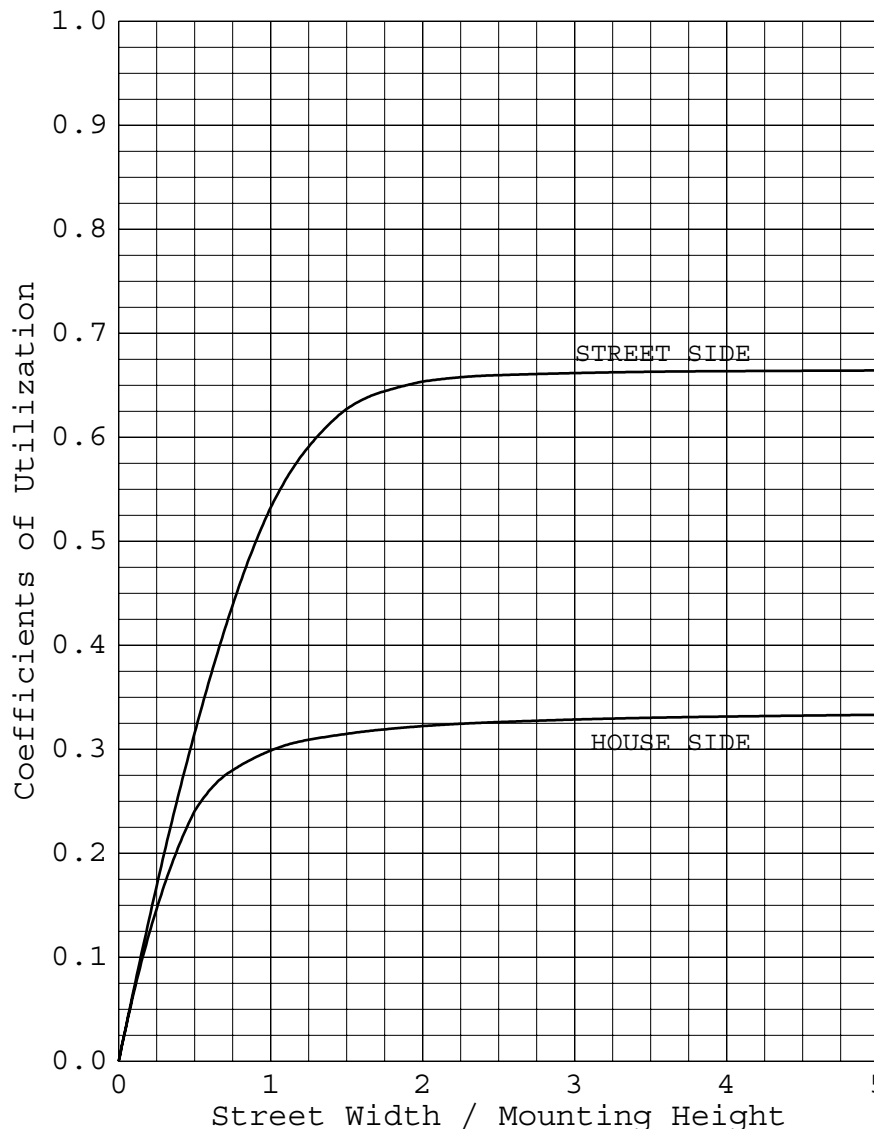




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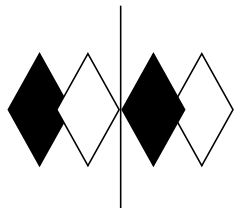
COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	5670	66.5
DOWNWARD HOUSE SIDE	2857	33.5
DOWNWARD TOTAL	8527	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	8527	100.0

EFFICACY = 105.9 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	5670.	66.5	
FL (0- 30)	1022.9	12.0	
FM (30- 60)	2870.0	33.7	
FH (60- 80)	1728.4	20.3	G1
FVH(80- 90)	48.8	0.6	G1
BACK LIGHT	2857.	33.5	
BL (0- 30)	749.5	8.8	B2
BM (30- 60)	1399.8	16.4	B2
BH (60- 80)	679.6	8.0	B2 G2
BVH(80- 90)	27.9	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	8527.	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	72.0	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	1.	1.	1.	2.	3.	3.	4.	5.	5.	6.
	85.0	7.	7.	10.	10.	9.	11.	12.	16.	69.	71.
V	82.5	25.	25.	34.	34.	25.	31.	30.	66.	487.	533.
E	80.0	53.	54.	74.	55.	48.	63.	61.	198.	1447.	1646.
R	77.5	83.	85.	109.	78.	83.	90.	113.	605.	2606.	2936.
T	75.0	96.	100.	124.	114.	120.	134.	203.	1721.	3643.	4004.
I	72.5	124.	129.	150.	156.	160.	211.	534.	3154.	4908.	5134.
C	70.0	172.	176.	196.	208.	208.	389.	1335.	4321.	5743.	5744.
A	68.0<<	231.	233.	248.	262.	282.	750.	2080.	5010.	6004.	5845.
L	67.5	245.	248.	262.	278.	318.	875.	2256.	5060.	5951.	5832.
	65.0	324.	330.	350.	408.	674.	1600.	2986.	4806.	5195.	5165.
A	62.5	485.	496.	571.	733.	1190.	2152.	3245.	4408.	4708.	4656.
N	60.0	760.	775.	868.	1095.	1520.	2307.	3188.	4160.	4412.	4357.
G	57.5	1027.	1035.	1108.	1305.	1660.	2333.	3111.	4000.	4177.	4125.
L	55.0	1197.	1202.	1265.	1428.	1759.	2347.	3060.	3938.	4077.	3996.
E	52.5	1326.	1331.	1383.	1538.	1861.	2347.	2984.	3644.	3754.	3719.
	50.0	1430.	1433.	1489.	1648.	1954.	2376.	2933.	3403.	3492.	3485.
	47.5	1526.	1532.	1596.	1748.	2043.	2417.	2877.	3218.	3298.	3315.
	45.0	1623.	1630.	1699.	1847.	2130.	2455.	2794.	3045.	3144.	3180.
	42.5	1720.	1730.	1812.	1979.	2224.	2495.	2757.	2901.	3000.	3045.
	40.0	1850.	1863.	1973.	2141.	2341.	2537.	2713.	2783.	2869.	2922.
	37.5	2082.	2094.	2186.	2307.	2441.	2571.	2629.	2676.	2759.	2807.
	35.0	2309.	2317.	2380.	2446.	2518.	2576.	2533.	2582.	2664.	2711.
	30.0	2575.	2581.	2593.	2591.	2560.	2449.	2395.	2473.	2556.	2590.
	25.0	2611.	2612.	2580.	2518.	2391.	2325.	2349.	2421.	2483.	2502.
	20.0	2391.	2384.	2356.	2338.	2327.	2340.	2374.	2425.	2447.	2443.
	15.0	2358.	2359.	2356.	2371.	2383.	2395.	2421.	2441.	2423.	2407.
	10.0	2435.	2435.	2426.	2436.	2441.	2450.	2448.	2426.	2395.	2380.
	5.0	2465.	2463.	2447.	2449.	2438.	2421.	2403.	2381.	2360.	2350.
	0.0	2300.	2300.	2300.	2300.	2300.	2300.	2300.	2300.	2300.	2300.

||
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.	6.	5.	4.	4.	3.	1.	0.	0.	0.	0.
	85.0	53.	43.	15.	14.	13.	17.	20.	24.	22.	6.	1.
V	82.5	401.	316.	40.	38.	34.	47.	61.	71.	83.	51.	48.
E	80.0	1087.	860.	92.	69.	64.	83.	111.	129.	148.	161.	162.
R	77.5	2036.	1609.	207.	114.	105.	122.	158.	180.	238.	256.	252.
T	75.0	2830.	2300.	434.	167.	151.	158.	195.	194.	273.	307.	306.
I	72.5	3633.	3065.	831.	229.	190.	190.	219.	208.	266.	301.	304.
C	70.0	4178.	3555.	1289.	292.	222.	222.	254.	216.	248.	240.	239.
A	68.0<<	4350.	3696.	1582.	330.	250.	245.	278.	237.	243.	221.	218.
L	67.5	4366.	3702.	1646.	339.	257.	250.	284.	243.	245.	219.	216.
	65.0	4208.	3626.	1924.	401.	285.	279.	305.	280.	261.	231.	228.
A	62.5	4012.	3598.	2168.	499.	311.	309.	319.	319.	295.	264.	256.
N	60.0	3946.	3629.	2384.	677.	341.	340.	323.	341.	332.	297.	288.
G	57.5	3890.	3657.	2572.	929.	378.	369.	342.	349.	357.	328.	318.
L	55.0	3813.	3620.	2718.	1202.	434.	399.	364.	362.	379.	354.	343.
E	52.5	3663.	3489.	2682.	1456.	526.	422.	388.	387.	401.	375.	366.
	50.0	3531.	3388.	2697.	1666.	683.	452.	414.	409.	410.	393.	387.
	47.5	3397.	3284.	2695.	1809.	868.	497.	442.	431.	426.	412.	409.
	45.0	3263.	3173.	2664.	1898.	1041.	590.	475.	455.	447.	438.	437.
	42.5	3133.	3050.	2619.	1951.	1193.	710.	527.	481.	471.	462.	461.
	40.0	2998.	2928.	2559.	1981.	1319.	829.	615.	525.	496.	483.	481.
	37.5	2868.	2803.	2488.	1994.	1422.	943.	713.	605.	553.	527.	525.
	35.0	2747.	2688.	2416.	1995.	1508.	1063.	814.	690.	635.	609.	606.
	30.0	2555.	2489.	2280.	1990.	1649.	1325.	1067.	911.	825.	780.	776.
	25.0	2412.	2351.	2183.	1993.	1780.	1553.	1366.	1213.	1112.	1058.	1055.
	20.0	2321.	2270.	2144.	2018.	1893.	1754.	1630.	1522.	1448.	1404.	1402.
	15.0	2289.	2247.	2154.	2063.	1988.	1910.	1846.	1785.	1741.	1712.	1710.
	10.0	2286.	2255.	2194.	2134.	2082.	2038.	2004.	1976.	1959.	1942.	1943.
	5.0	2293.	2280.	2245.	2217.	2194.	2167.	2150.	2136.	2127.	2116.	2115.
	0.0	2300.	2300.	2300.	2300.	2300.	2300.	2300.	2300.	2300.	2300.	2300.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	55
5- 10	162
10- 15	261
15- 20	349
20- 25	432
25- 30	513
30- 35	584
35- 40	642
40- 45	691
45- 50	741
50- 55	791
55- 60	820
60- 65	806
65- 70	755
70- 75	558
75- 80	289
80- 85	73
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	217
0- 20	828
0- 30	1772
0- 40	2999
0- 50	4431
0- 60	6042
0- 70	7603
0- 80	8450
0- 90	8527
0-100	8527
0-110	8527
0-120	8527
0-130	8527
0-140	8527
0-150	8527
0-160	8527
0-170	8527
0-180	8527



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PAGE: 9 OF 9

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SUITE 201
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