

REPORT NUMBER: ITL84997

PAGE: 1 OF 9

ISSUE DATE: 06/19/15

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 12C 5 X 2ES D XX 3 XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY PAINTED INTERIOR FINISH, 1 WHITE CIRCUIT BOARD WITH 12 LEDS, 1 CLEAR PLASTIC LENS WITH 1 OPTIC PER LED, CLEAR FLAT GLASS LENS IN CAST GRAY PAINTED METAL DOOR FRAME.

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

INPUT ELECTRICAL: 120.0 VOLTS, 49.1 WATTS, 0.410 AMPS

LED DRIVER: LED ROADWAY LIGHTING LRL66165-LF, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER IS 1200mA OUTPUT. LRLM-WH91/92-OU1 SURGE PROTECTOR.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVER AND SURGE PROTECTOR. LED DRIVER AND SURGE PROTECTOR INFORMATION PROVIDED BY CLIENT.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET

TOTAL LUMEN OUTPUT: 4369

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85001: 3809K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85001: 73

LED DC DRIVE CURRENT (mA): 1200 (PROVIDED BY CLIENT)

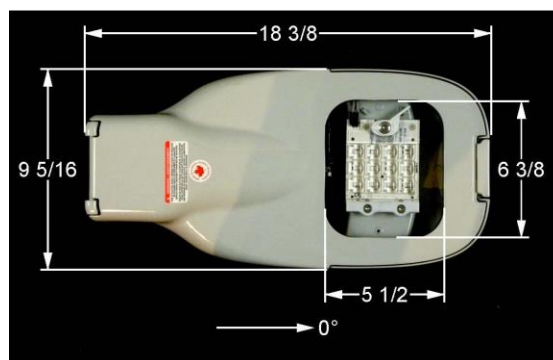
POWER FACTOR: 99.8

BUG RATING: B1 U0 G1

LUMINAIRE EFFICACY: 89.0

IES CLASSIFICATION: Medium, Type II

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



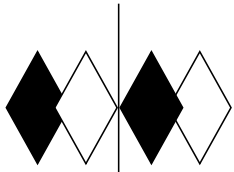
FLUX DISTRIBUTION

LUMENS	DOWNWARD	UPWARD	TOTALS
HOUSE SIDE	1461	0	1461
STREET SIDE	2908	0	2908
TOTALS	4369	0	4369

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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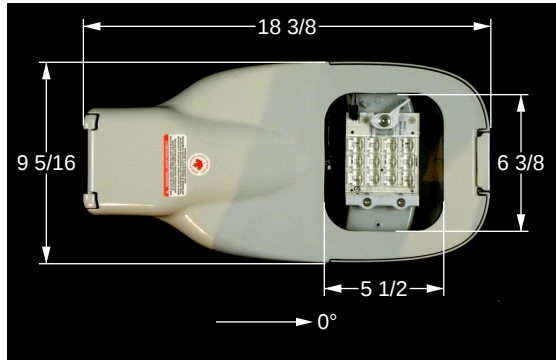
NVLAP
NVLAP LAB CODE: 200925-0

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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PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 12C 5 X 2ES D XX 3

XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY PAINTED INTERIOR FINISH, 1 WHITE CIRCUIT BOARD WITH 12 LEDs, 1 CLEAR PLASTIC LENS WITH 1 OPTIC PER LED, CLEAR FLAT GLASS LENS IN CAST GRAY PAINTED METAL DOOR FRAME.

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

INPUT ELECTRICAL: 120.0 VOLTS, 49.1 WATTS, 0.410 AMPS

LED DRIVER: LED ROADWAY LIGHTING

LRL66165-LF, DRIVER HAS MULTIPLE

LEADS, ONLY LINE INPUT AND LED OUTPUT

LEADS CONNECTED FOR THIS TEST, CLIENT

STATES DRIVER IS 1200mA OUTPUT. LRLM-

WH91/92-OU1 SURGE PROTECTOR.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVER AND SURGE PROTECTOR. LED DRIVER AND SURGE PROTECTOR INFORMATION PROVIDED BY CLIENT.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET

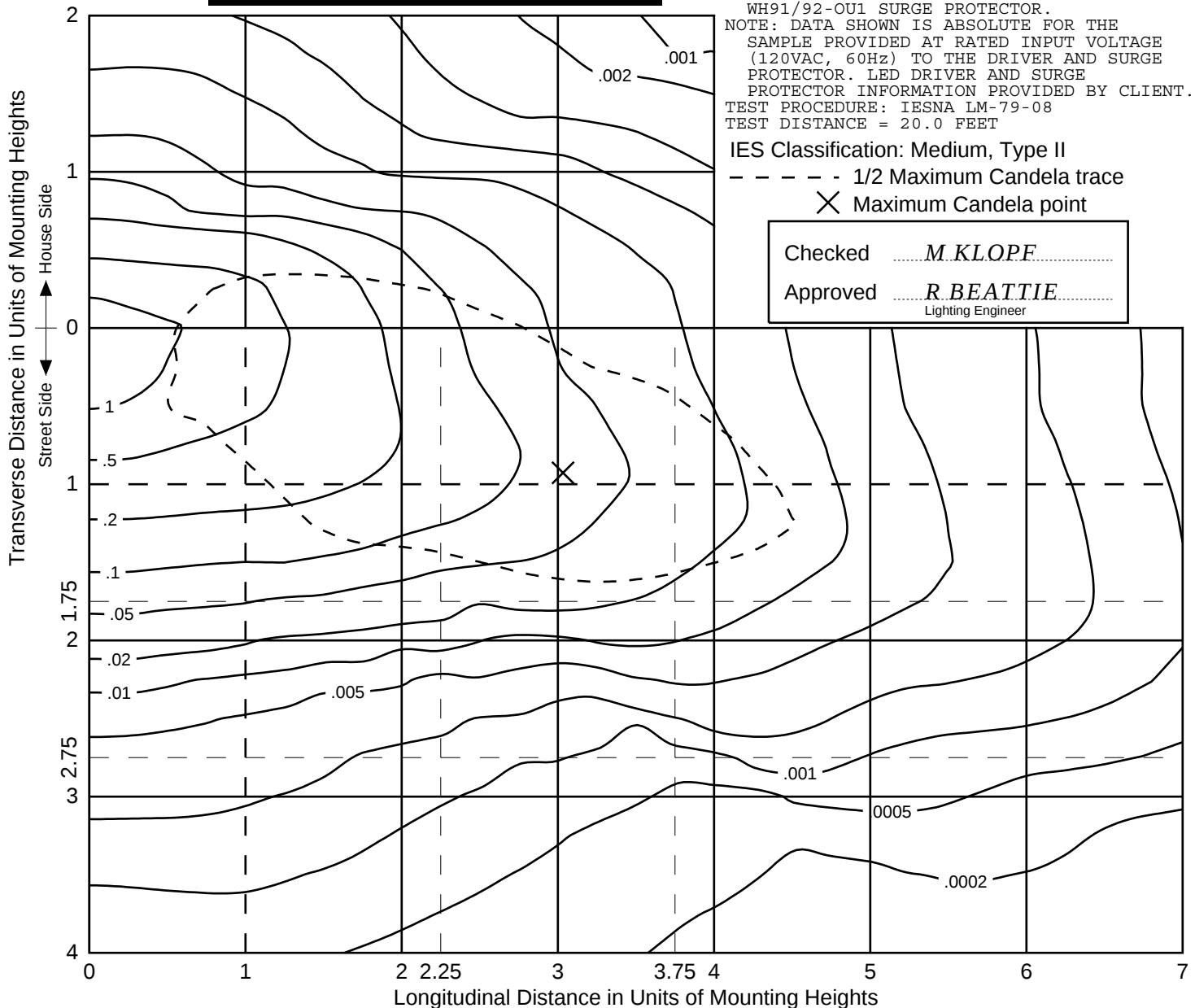
IES Classification: Medium, Type II

--- 1/2 Maximum Candela trace

X Maximum Candela point

CheckedM.KLOPF.....

ApprovedR.BEATTIE.....
Lighting Engineer



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PREPARED FOR: LED ROADWAY LIGHTING LTD.
CATALOG NUMBER: NXT 12C 5 X 2ES D XX 3
XX X XX X

LUMINAIRE: CAST METAL HOUSING WITH GRAY
PAINTED INTERIOR FINISH, 1 WHITE
CIRCUIT BOARD WITH 12 LEDS, 1 CLEAR
PLASTIC LENS WITH 1 OPTIC PER LED,
CLEAR FLAT GLASS LENS IN CAST GRAY
PAINTED METAL DOOR FRAME.

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

INPUT ELECTRICAL: 120.0 VOLTS, 49.1
WATTS, 0.410 AMPS

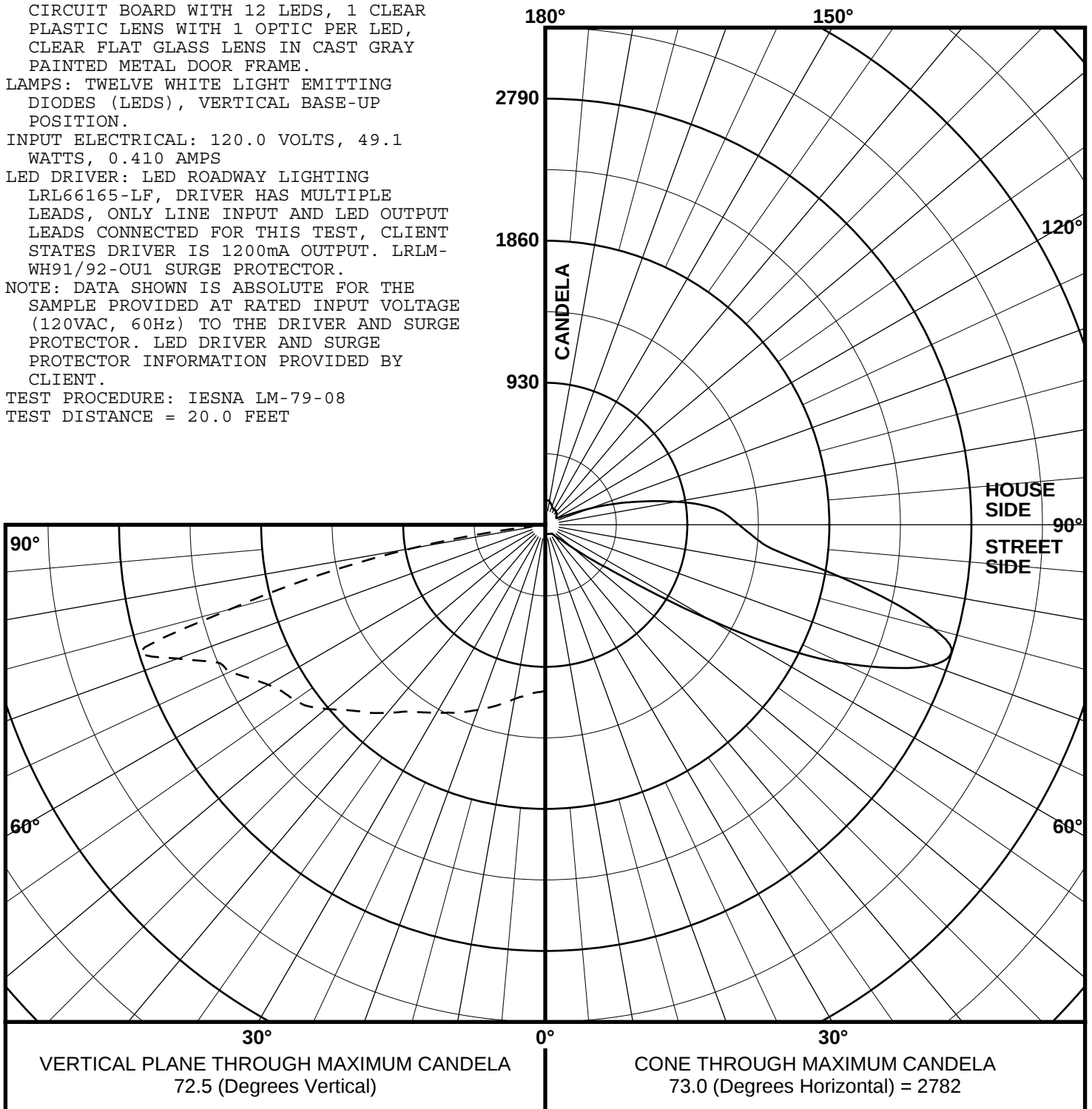
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NOTE: DATA SHOWN IS ABSOLUTE FOR THE
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(120VAC, 60Hz) TO THE DRIVER AND SURGE
PROTECTOR. LED DRIVER AND SURGE
PROTECTOR INFORMATION PROVIDED BY
CLIENT.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

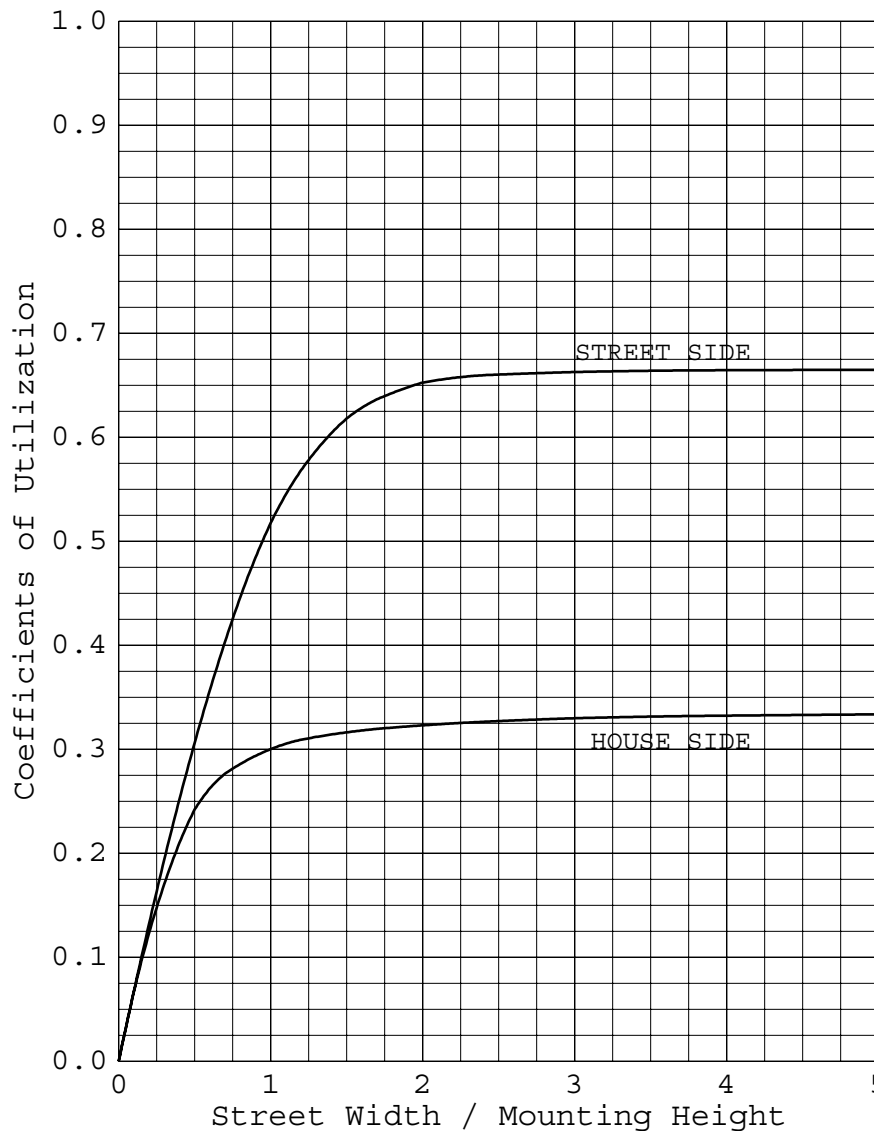




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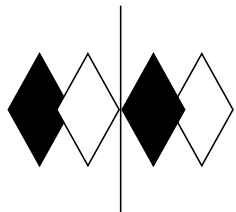
COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	2908	66.6
DOWNWARD HOUSE SIDE	1461	33.4
DOWNWARD TOTAL	4369	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	4369	100.0

EFFICACY = 89.0 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	2908.	66.6	
FL (0- 30)	519.5	11.9	
FM (30- 60)	1506.2	34.5	
FH (60- 80)	857.8	19.6	G1
FVH(80- 90)	24.2	0.6	G1
BACK LIGHT	1461.	33.4	
BL (0- 30)	390.4	8.9	B1
BM (30- 60)	746.6	17.1	B1
BH (60- 80)	314.5	7.2	B1 G1
BVH(80- 90)	9.7	0.2	G0
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	4369.	100.0	

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

BUG RATING: B1 U0 G1



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CANDELA TABULATION

	STREET SIDE					LATERAL ANGLE							
	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.		
	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.	2.	2.	2.	3.	3.	3.		
	85.0	4.	4.	4.	4.	4.	5.	6.	8.	9.	10.	9.	
V	82.5	9.	9.	13.	12.	11.	14.	16.	46.	287.	292.	147.	
E	80.0	23.	24.	32.	21.	25.	26.	33.	254.	889.	910.	537.	
R	77.5	27.	28.	36.	35.	39.	43.	64.	868.	1509.	1503.	925.	
T	75.0	39.	41.	52.	55.	54.	66.	148.	1512.	2135.	2168.	1249.	
I	72.5<<	62.	63.	69.	72.	70.	128.	492.	2140.	2782.	2635.	1432.	
C	70.0	85.	84.	88.	92.	115.	315.	978.	2402.	2561.	2389.	1555.	
A	67.5	116.	119.	119.	155.	244.	647.	1408.	2449.	2345.	2224.	1624.	
L	65.0	192.	201.	225.	314.	510.	1021.	1724.	2350.	2278.	2171.	1721.	
	62.5	322.	335.	369.	498.	764.	1232.	1724.	2208.	2178.	2096.	1758.	
A	60.0	461.	477.	517.	634.	847.	1230.	1649.	2115.	2094.	2037.	1791.	
N	57.5	563.	577.	608.	699.	886.	1233.	1621.	2039.	2037.	1997.	1818.	
G	55.0	633.	641.	664.	751.	929.	1235.	1600.	1982.	2001.	1971.	1867.	
L	52.5	675.	680.	715.	806.	968.	1238.	1572.	1896.	1953.	1945.	1897.	
E	50.0	712.	720.	758.	861.	998.	1247.	1548.	1809.	1875.	1881.	1890.	
	47.5	753.	761.	809.	905.	1036.	1263.	1531.	1721.	1794.	1810.	1869.	
	45.0	799.	807.	858.	951.	1093.	1286.	1520.	1645.	1727.	1750.	1833.	
	42.5	843.	850.	905.	1026.	1156.	1315.	1505.	1589.	1671.	1693.	1770.	
	40.0	898.	915.	1005.	1115.	1213.	1352.	1464.	1532.	1608.	1630.	1691.	
	37.5	1045.	1059.	1130.	1203.	1264.	1389.	1413.	1472.	1544.	1566.	1617.	
	35.0	1174.	1184.	1226.	1265.	1312.	1384.	1357.	1424.	1496.	1516.	1550.	
	32.5	1254.	1263.	1282.	1302.	1348.	1322.	1310.	1390.	1457.	1473.	1482.	
	30.0	1280.	1288.	1312.	1339.	1309.	1254.	1273.	1358.	1421.	1435.	1420.	
	25.0	1262.	1268.	1255.	1216.	1170.	1184.	1258.	1320.	1357.	1360.	1310.	
	20.0	1110.	1114.	1123.	1130.	1151.	1218.	1256.	1287.	1289.	1283.	1221.	
	15.0	1146.	1154.	1181.	1205.	1218.	1240.	1254.	1248.	1225.	1213.	1160.	
	10.0	1215.	1222.	1237.	1242.	1237.	1235.	1223.	1193.	1158.	1149.	1122.	
	5.0	1185.	1191.	1196.	1191.	1174.	1160.	1141.	1122.	1112.	1110.	1101.	
	0.0	1089.	1089.	1089.	1089.	1089.	1089.	1089.	1089.	1089.	1089.	1089.	
									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.	2.	2.	2.	2.	1.	0.	0.	0.	0.	0.
	85.0	9.	8.	8.	7.	6.	4.	3.	1.	1.	0.	0.
V	82.5	146.	120.	19.	16.	14.	16.	15.	13.	9.	2.	2.
E	80.0	504.	418.	74.	30.	28.	37.	37.	38.	36.	5.	4.
R	77.5	838.	771.	207.	53.	46.	60.	69.	70.	71.	69.	68.
T	75.0	1113.	1029.	404.	91.	65.	88.	93.	94.	116.	121.	120.
I	72.5<<	1268.	1132.	571.	133.	88.	104.	115.	118.	143.	161.	157.
C	70.0	1403.	1256.	708.	171.	111.	114.	128.	125.	161.	166.	168.
A	67.5	1497.	1370.	860.	207.	138.	127.	127.	128.	158.	152.	151.
L	65.0	1607.	1488.	995.	248.	151.	145.	134.	123.	137.	140.	141.
	62.5	1667.	1556.	1120.	309.	164.	161.	144.	136.	126.	115.	114.
A	60.0	1736.	1642.	1239.	401.	178.	172.	157.	151.	135.	122.	118.
N	57.5	1791.	1716.	1343.	533.	194.	181.	165.	165.	152.	135.	132.
G	55.0	1845.	1782.	1433.	685.	207.	188.	178.	178.	169.	152.	149.
L	52.5	1881.	1826.	1500.	828.	234.	198.	192.	194.	187.	168.	165.
E	50.0	1894.	1851.	1539.	950.	304.	212.	205.	208.	202.	183.	182.
	47.5	1881.	1847.	1560.	1045.	401.	231.	220.	216.	210.	202.	201.
	45.0	1850.	1815.	1562.	1104.	514.	264.	237.	233.	228.	222.	223.
	42.5	1784.	1753.	1536.	1135.	620.	326.	254.	246.	245.	243.	244.
	40.0	1697.	1673.	1491.	1147.	706.	396.	289.	258.	254.	254.	255.
	37.5	1620.	1598.	1444.	1149.	771.	470.	340.	289.	271.	265.	265.
	35.0	1546.	1522.	1388.	1140.	825.	548.	393.	333.	310.	299.	298.
	32.5	1472.	1447.	1333.	1128.	865.	623.	458.	378.	351.	341.	340.
	30.0	1406.	1378.	1280.	1114.	901.	696.	537.	441.	398.	382.	379.
	25.0	1290.	1261.	1192.	1091.	960.	823.	707.	615.	563.	539.	534.
	20.0	1201.	1177.	1134.	1077.	1002.	925.	853.	791.	753.	732.	737.
	15.0	1144.	1126.	1100.	1073.	1036.	999.	963.	930.	910.	898.	903.
	10.0	1112.	1099.	1083.	1072.	1057.	1042.	1029.	1016.	1009.	1009.	1010.
	5.0	1097.	1090.	1079.	1075.	1068.	1065.	1062.	1057.	1057.	1060.	1061.
	0.0	1089.	1089.	1089.	1089.	1089.	1089.	1089.	1089.	1089.	1089.	1089.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	26
5- 10	80
10- 15	133
15- 20	179
20- 25	223
25- 30	269
30- 35	312
35- 40	347
40- 45	374
45- 50	396
50- 55	411
55- 60	413
60- 65	399
65- 70	348
70- 75	276
75- 80	150
80- 85	33
85- 90	1
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	107
0- 20	418
0- 30	910
0- 40	1569
0- 50	2338
0- 60	3163
0- 70	3909
0- 80	4335
0- 90	4369
0-100	4369
0-110	4369
0-120	4369
0-130	4369
0-140	4369
0-150	4369
0-160	4369
0-170	4369
0-180	4369



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