

REPORT NUMBER: ITL85753

ISSUE DATE: 10/05/15

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 24S 0 X 2ES 4 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. ONLY 24 LEDS ON FOR THIS TEST.

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

INPUT ELECTRICAL: 120.0 VOLTS, 34.7 WATTS, 0.294 AMPS

LED DRIVER: LED ROADWAY LIGHTING LRL65634-LF, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER PROGRAMMED FOR 450mA OUTPUT. 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. DRIVER AND SURGE PROTECTOR INFORMATION PROVIDED BY CLIENT.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET

TOTAL LUMEN OUTPUT: 4091

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85768: 3753K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85768: 73

LED DC DRIVE CURRENT (mA): 450 (PROVIDED BY CLIENT)

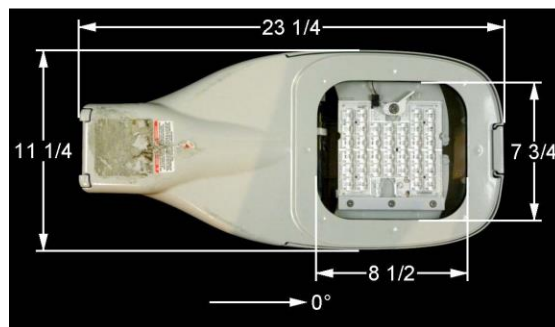
POWER FACTOR: 98.4 %

BUG RATING: B1 U0 G1

LUMINAIRE EFFICACY: 117.9 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	1314	0	1314
STREET SIDE	2777	0	2777
TOTALS	4091	0	4091

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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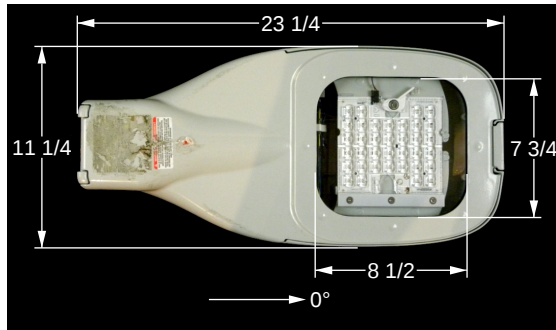
NVLAP
NVLAP LAB CODE: 200925-0

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 24S 0 X 2ES 4 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. ONLY 24 LEDS ON FOR THIS TEST. LAMPS: TWENTY-FOUR WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION. INPUT ELECTRICAL: 120.0 VOLTS, 34.7 WATTS, 0.294 AMPS. LED DRIVER: LED ROADWAY LIGHTING LRL65634-LF, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER PROGRAMMED FOR 450mA OUTPUT. 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. DRIVER AND SURGE PROTECTOR INFORMATION PROVIDED BY CLIENT.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET

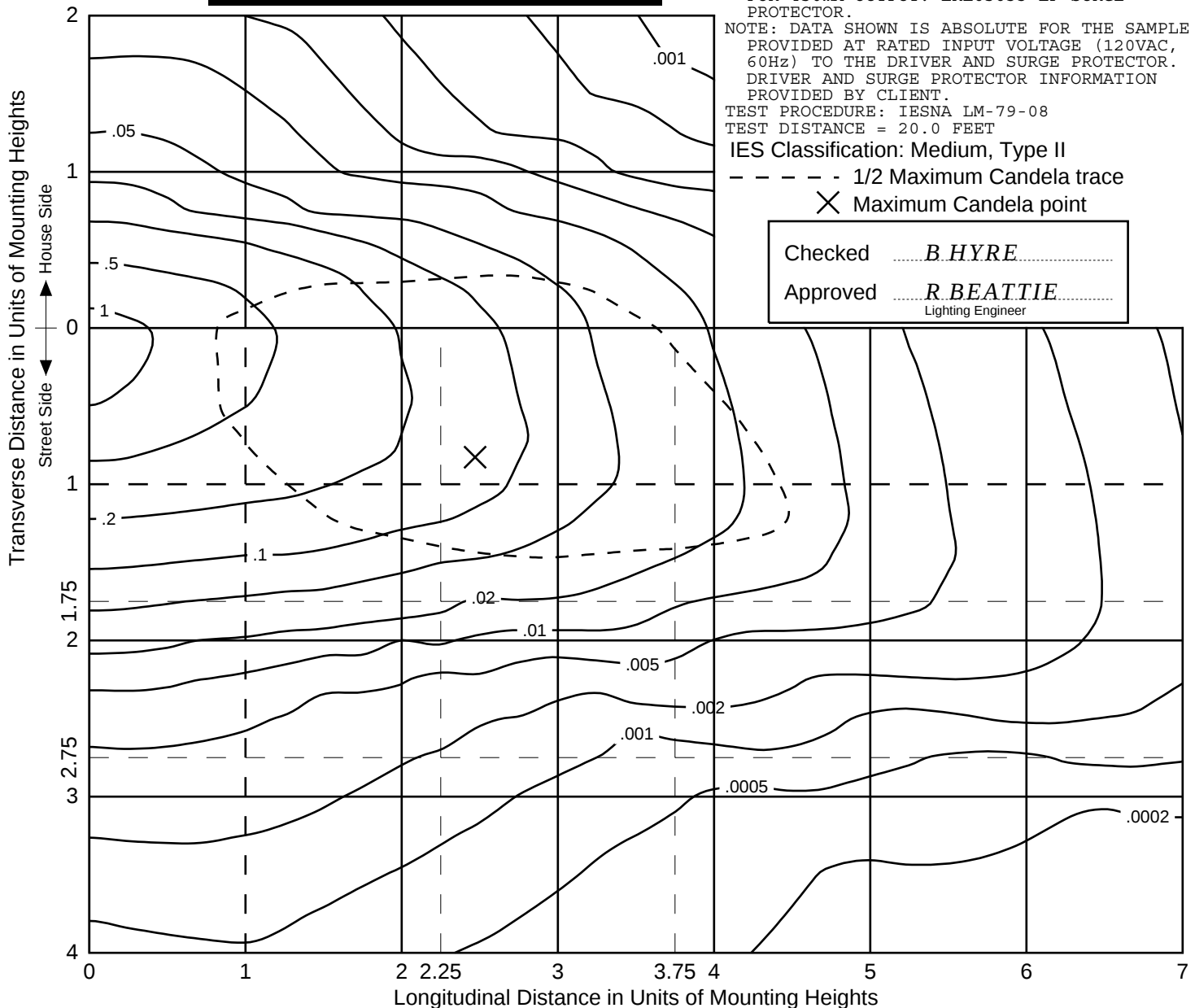
IES Classification: Medium, Type II

--- 1/2 Maximum Candela trace

X Maximum Candela point

Checked *B. HYRE*

Approved *R. BEATTIE*
Lighting Engineer



REPORT NUMBER: ITL85753
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PREPARED FOR: LED ROADWAY LIGHTING LTD.
CATALOG NUMBER: NXT 24S 0 X 2ES 4 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. ONLY 24 LEDS
ON FOR THIS TEST.

LAMPS: TWENTY-FOUR WHITE LIGHT EMITTING
DIODES (LEDS), VERTICAL BASE-UP
POSITION.

INPUT ELECTRICAL: 120.0 VOLTS, 34.7
WATTS, 0.294 AMPS

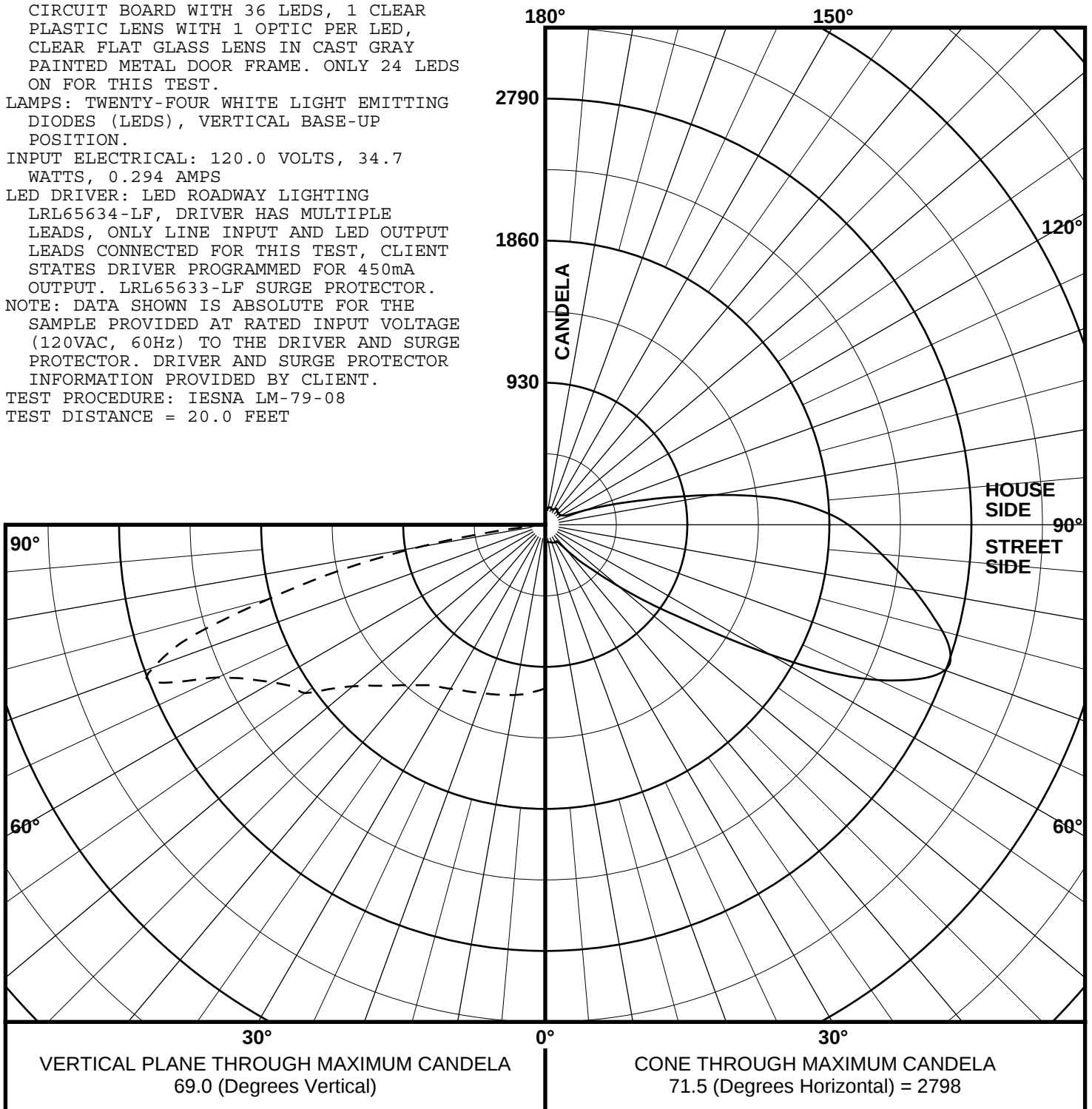
LED DRIVER: LED ROADWAY LIGHTING
LRL65634-LF, DRIVER HAS MULTIPLE
LEADS, ONLY LINE INPUT AND LED OUTPUT
LEADS CONNECTED FOR THIS TEST, CLIENT
STATES DRIVER PROGRAMMED FOR 450mA
OUTPUT. LRL65633-LF SURGE PROTECTOR.

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

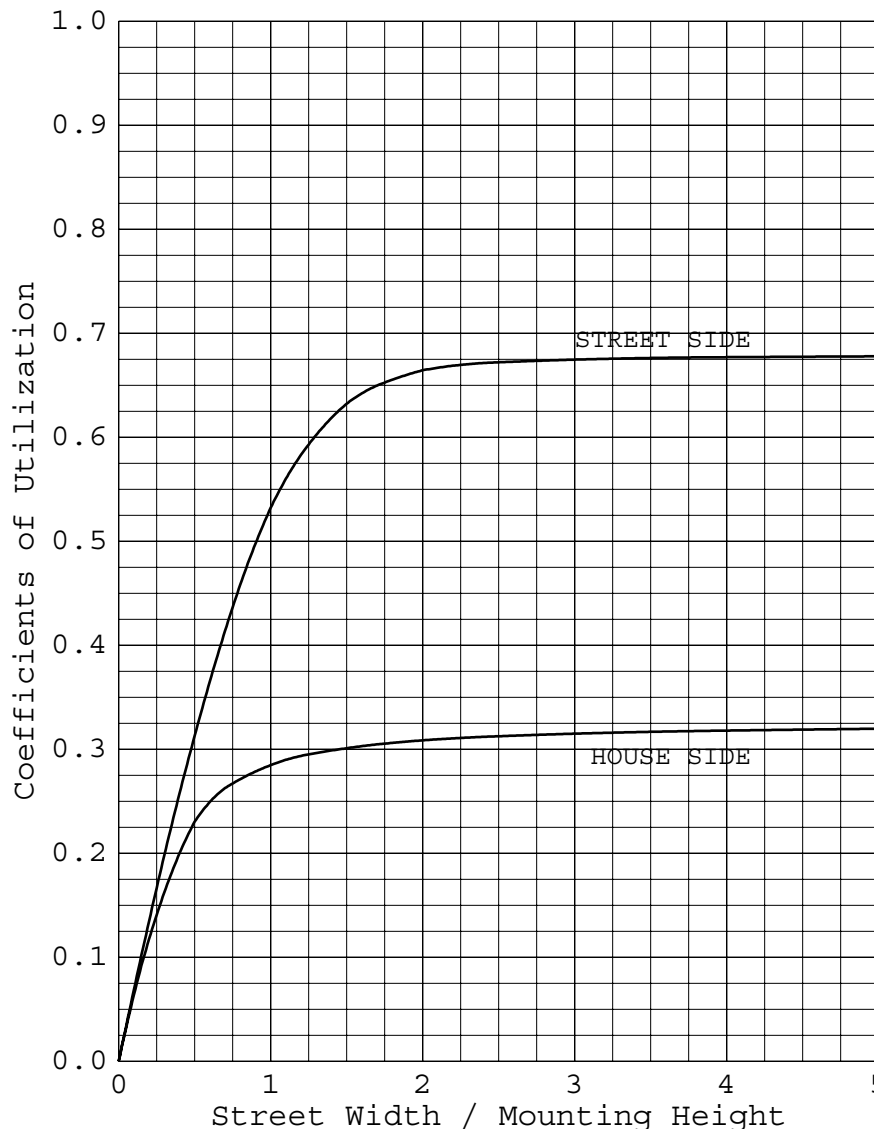




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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	2777	67.9
DOWNWARD HOUSE SIDE	1314	32.1
DOWNWARD TOTAL	4091	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	4091	100.0

EFFICACY = 117.9 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	2777.	67.9	
FL (0- 30)	490.7	12.0	
FM (30- 60)	1394.5	34.1	
FH (60- 80)	863.0	21.1	G1
FVH(80- 90)	28.8	0.7	G1
BACK LIGHT	1314.	32.1	
BL (0- 30)	346.1	8.5	B1
BM (30- 60)	643.9	15.7	B1
BH (60- 80)	312.7	7.6	B1 G1
BVH(80- 90)	11.6	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	4091.	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										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	71.5	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.	3.	3.	3.	3.
	85.0	6.	6.	8.	8.	8.	9.	9.	12.	50.	47.
V	82.5	16.	17.	24.	22.	18.	22.	21.	46.	320.	341.
E	80.0	31.	33.	45.	34.	33.	39.	39.	144.	845.	913.
R	77.5	46.	48.	62.	48.	52.	53.	72.	462.	1368.	1490.
T	75.0	55.	59.	70.	69.	70.	79.	139.	1104.	1871.	2023.
I	72.5	75.	78.	87.	91.	91.	128.	410.	1739.	2424.	2463.
C	70.0	99.	103.	109.	116.	116.	271.	851.	2253.	2729.	2649.
A	69.0<<	109.	113.	118.	128.	133.	373.	1023.	2405.	2798.	2692.
L	67.5	124.	130.	137.	148.	200.	569.	1267.	2406.	2703.	2657.
	65.0	171.	172.	192.	249.	430.	915.	1527.	2227.	2367.	2345.
A	62.5	291.	290.	334.	435.	658.	1090.	1576.	2064.	2188.	2157.
N	60.0	441.	440.	480.	584.	765.	1126.	1543.	1971.	2063.	2031.
G	57.5	542.	540.	573.	662.	820.	1134.	1521.	1903.	1967.	1932.
L	55.0	607.	607.	635.	712.	872.	1138.	1498.	1870.	1920.	1871.
E	52.5	663.	662.	686.	768.	924.	1147.	1455.	1707.	1763.	1747.
	50.0	710.	712.	740.	821.	974.	1173.	1428.	1607.	1645.	1647.
	47.5	757.	762.	793.	874.	1023.	1194.	1394.	1528.	1559.	1573.
	45.0	804.	811.	849.	932.	1065.	1213.	1351.	1449.	1490.	1512.
	42.5	864.	871.	916.	1009.	1113.	1232.	1328.	1385.	1426.	1455.
	40.0	961.	968.	1017.	1087.	1164.	1247.	1292.	1329.	1370.	1398.
	37.5	1070.	1086.	1116.	1157.	1204.	1252.	1252.	1284.	1324.	1351.
	35.0	1163.	1172.	1188.	1211.	1233.	1238.	1209.	1247.	1285.	1309.
	30.0	1255.	1260.	1258.	1249.	1213.	1162.	1158.	1206.	1240.	1250.
	25.0	1233.	1233.	1213.	1181.	1134.	1126.	1145.	1185.	1203.	1203.
	20.0	1140.	1139.	1131.	1128.	1127.	1144.	1159.	1180.	1175.	1164.
	15.0	1155.	1155.	1152.	1158.	1162.	1168.	1174.	1168.	1152.	1141.
	10.0	1185.	1186.	1179.	1183.	1183.	1176.	1165.	1147.	1131.	1121.
	5.0	1168.	1167.	1159.	1157.	1150.	1142.	1129.	1117.	1104.	1095.
	0.0	1072.	1072.	1072.	1072.	1072.	1072.	1072.	1072.	1072.	1072.

||
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	2.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.
	85.0	19.	16.	8.	7.	6.	6.	5.	4.	1.	0.	0.
V	82.5	187.	140.	19.	18.	16.	19.	24.	26.	29.	7.	2.
E	80.0	515.	389.	42.	34.	31.	40.	52.	54.	66.	61.	55.
R	77.5	953.	732.	91.	54.	50.	59.	77.	91.	117.	125.	121.
T	75.0	1340.	1044.	183.	78.	72.	77.	92.	98.	145.	163.	157.
I	72.5	1705.	1392.	344.	107.	93.	94.	106.	96.	137.	153.	161.
C	70.0	1934.	1619.	526.	134.	109.	109.	122.	104.	120.	118.	118.
A	69.0<<	1984.	1657.	590.	144.	115.	115.	128.	109.	119.	108.	107.
L	67.5	2011.	1679.	685.	156.	125.	124.	138.	119.	123.	106.	104.
	65.0	1944.	1665.	826.	180.	142.	138.	150.	135.	131.	114.	112.
A	62.5	1885.	1669.	948.	215.	155.	153.	159.	157.	144.	127.	124.
N	60.0	1861.	1689.	1063.	276.	169.	168.	162.	171.	163.	145.	141.
G	57.5	1845.	1707.	1150.	371.	185.	183.	168.	178.	178.	160.	156.
L	55.0	1803.	1687.	1228.	486.	208.	197.	180.	181.	188.	174.	169.
E	52.5	1733.	1620.	1213.	601.	239.	209.	191.	190.	199.	184.	179.
	50.0	1671.	1574.	1222.	707.	295.	223.	204.	203.	206.	194.	191.
	47.5	1606.	1530.	1225.	782.	368.	238.	217.	214.	212.	202.	200.
	45.0	1541.	1486.	1213.	833.	442.	268.	232.	226.	220.	214.	213.
	42.5	1480.	1428.	1196.	866.	511.	317.	250.	236.	230.	225.	224.
	40.0	1417.	1370.	1172.	887.	573.	370.	283.	251.	241.	236.	235.
	37.5	1357.	1316.	1145.	899.	625.	421.	327.	282.	261.	251.	248.
	35.0	1299.	1261.	1115.	906.	669.	473.	372.	322.	297.	285.	280.
	30.0	1207.	1170.	1059.	913.	749.	591.	479.	412.	375.	361.	355.
	25.0	1137.	1104.	1020.	926.	818.	707.	614.	540.	496.	475.	470.
	20.0	1092.	1067.	1005.	944.	881.	808.	744.	690.	653.	636.	628.
	15.0	1073.	1052.	1008.	967.	929.	889.	853.	820.	797.	785.	778.
	10.0	1067.	1052.	1023.	996.	974.	952.	936.	918.	909.	902.	897.
	5.0	1067.	1060.	1046.	1033.	1022.	1008.	1001.	994.	991.	986.	982.
	0.0	1072.	1072.	1072.	1072.	1072.	1072.	1072.	1072.	1072.	1072.	1072.

CONE OF MAXIMUM CANDELA



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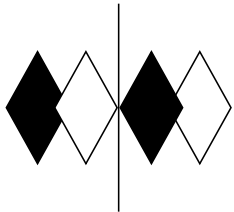
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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	26
5- 10	76
10- 15	124
15- 20	166
20- 25	204
25- 30	242
30- 35	278
35- 40	307
40- 45	331
45- 50	354
50- 55	376
55- 60	392
60- 65	387
65- 70	364
70- 75	277
75- 80	148
80- 85	38
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	102
0- 20	391
0- 30	837
0- 40	1422
0- 50	2107
0- 60	2875
0- 70	3626
0- 80	4051
0- 90	4091
0-100	4091
0-110	4091
0-120	4091
0-130	4091
0-140	4091
0-150	4091
0-160	4091
0-170	4091
0-180	4091



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