

REPORT NUMBER: ITL85796

ISSUE DATE: 10/07/15

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 12C 5 X 4AH B 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: 230.0 VOLTS, 41.3 WATTS, 0.181 AMPS

LED DRIVER: LED ROADWAY LIGHTING LRL66164-LF, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER IS 1050mA OUTPUT. LRLM-WH91/92-OU1 SURGE PROTECTOR.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (230VAC, 50Hz) 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: 3734

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85799: 3799K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85799: 73

LED DC DRIVE CURRENT (mA): 1050 (PROVIDED BY CLIENT)

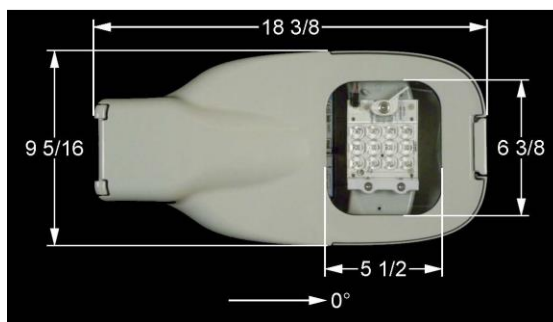
POWER FACTOR: 99.2 %

BUG RATING: B1 U0 G1

LUMINAIRE EFFICACY: 90.4 lm/W

IES CLASSIFICATION: Medium, Type IV

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

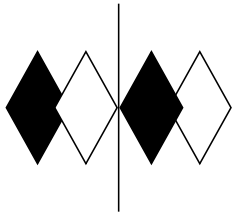


FLUX DISTRIBUTION

LUMENS	DOWNWARD	UPWARD	TOTALS
HOUSE SIDE	1490	0	1490
STREET SIDE	2244	0	2244
TOTALS	3734	0	3734

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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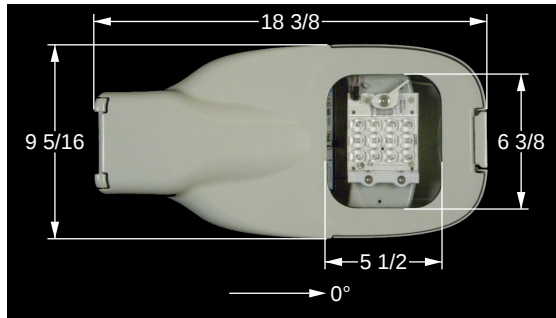
NVLAP
NVLAP LAB CODE: 200925-0

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 4AH B 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: 230.0 VOLTS, 41.3 WATTS, 0.181 AMPS

LED DRIVER: LED ROADWAY LIGHTING LRL66164-LF, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER IS 1050mA OUTPUT. LRLM-WH91/92-OU1 SURGE PROTECTOR.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (230VAC, 50Hz) 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

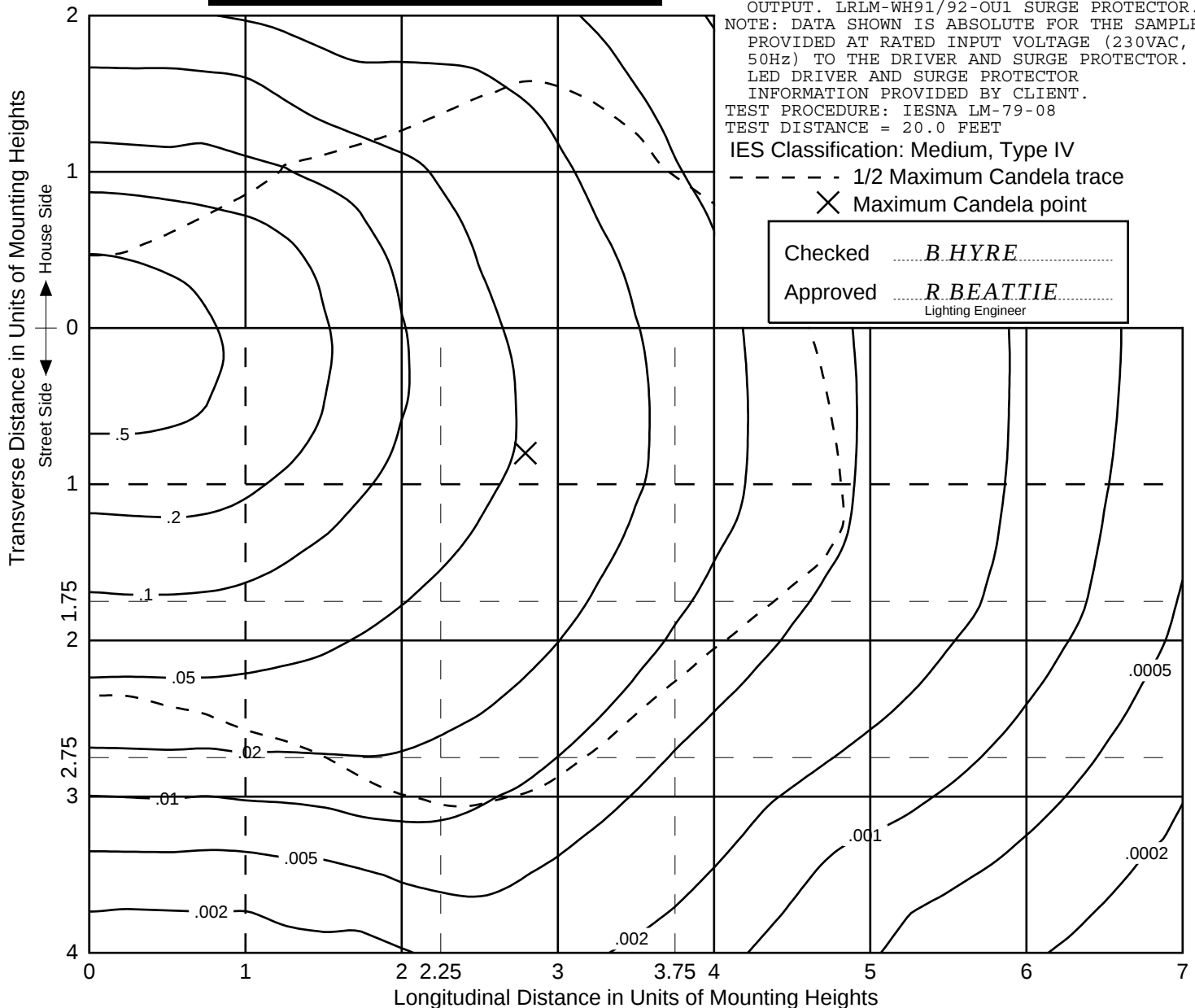
IES Classification: Medium, Type IV

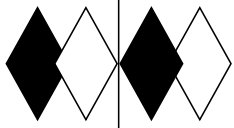
--- 1/2 Maximum Candela trace

X Maximum Candela point

Checked *B. HYRE*

Approved *R. BEATTIE*
Lighting Engineer





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PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 12C 5 X 4AH B 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: 230.0 VOLTS, 41.3
WATTS, 0.181 AMPS

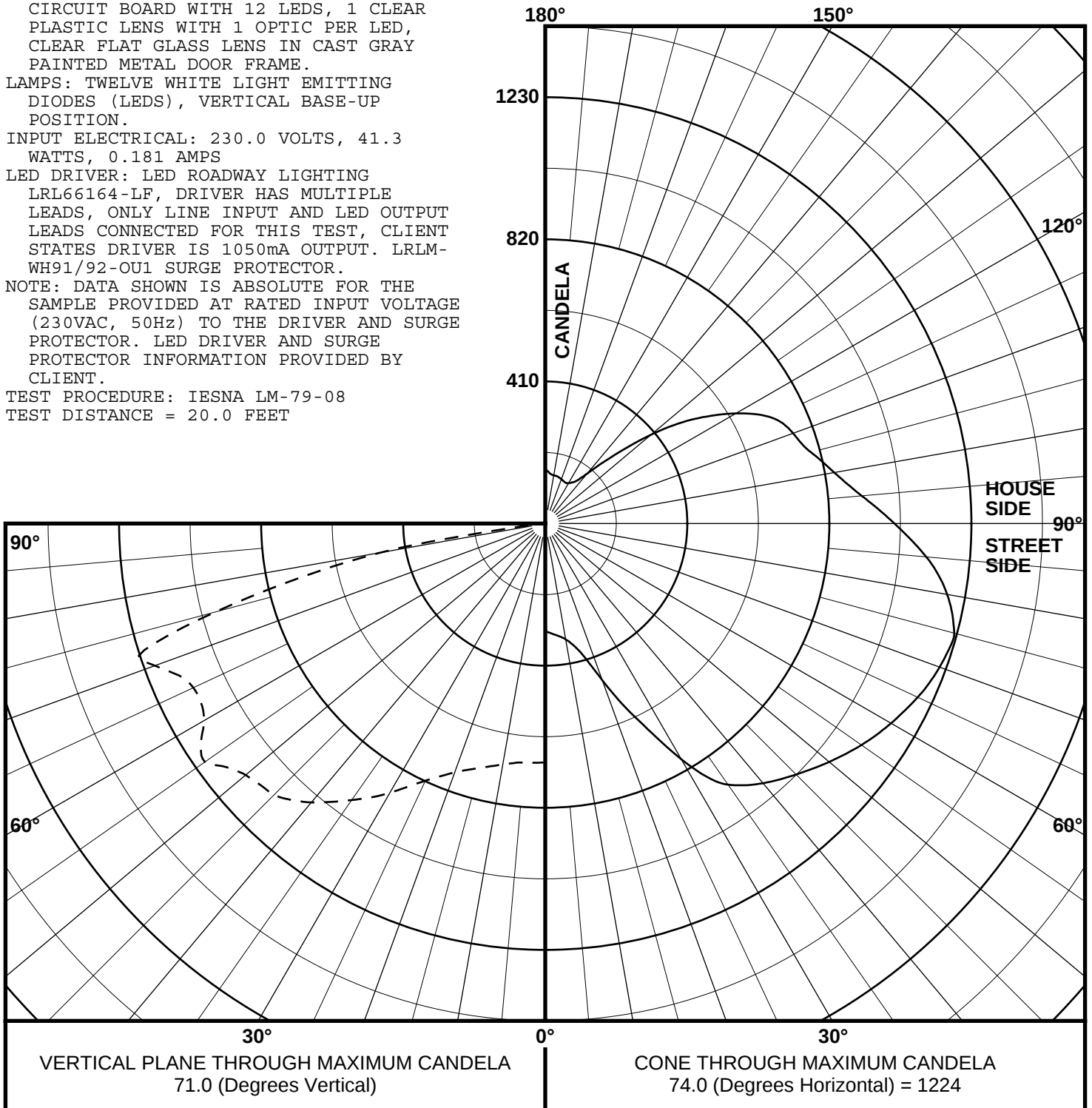
LED DRIVER: LED ROADWAY LIGHTING
LRL66164-LF, DRIVER HAS MULTIPLE
LEADS, ONLY LINE INPUT AND LED OUTPUT
LEADS CONNECTED FOR THIS TEST, CLIENT
STATES DRIVER IS 1050mA OUTPUT. LRLM-
WH91/92-OU1 SURGE PROTECTOR.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED AT RATED INPUT VOLTAGE
(230VAC, 50Hz) 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

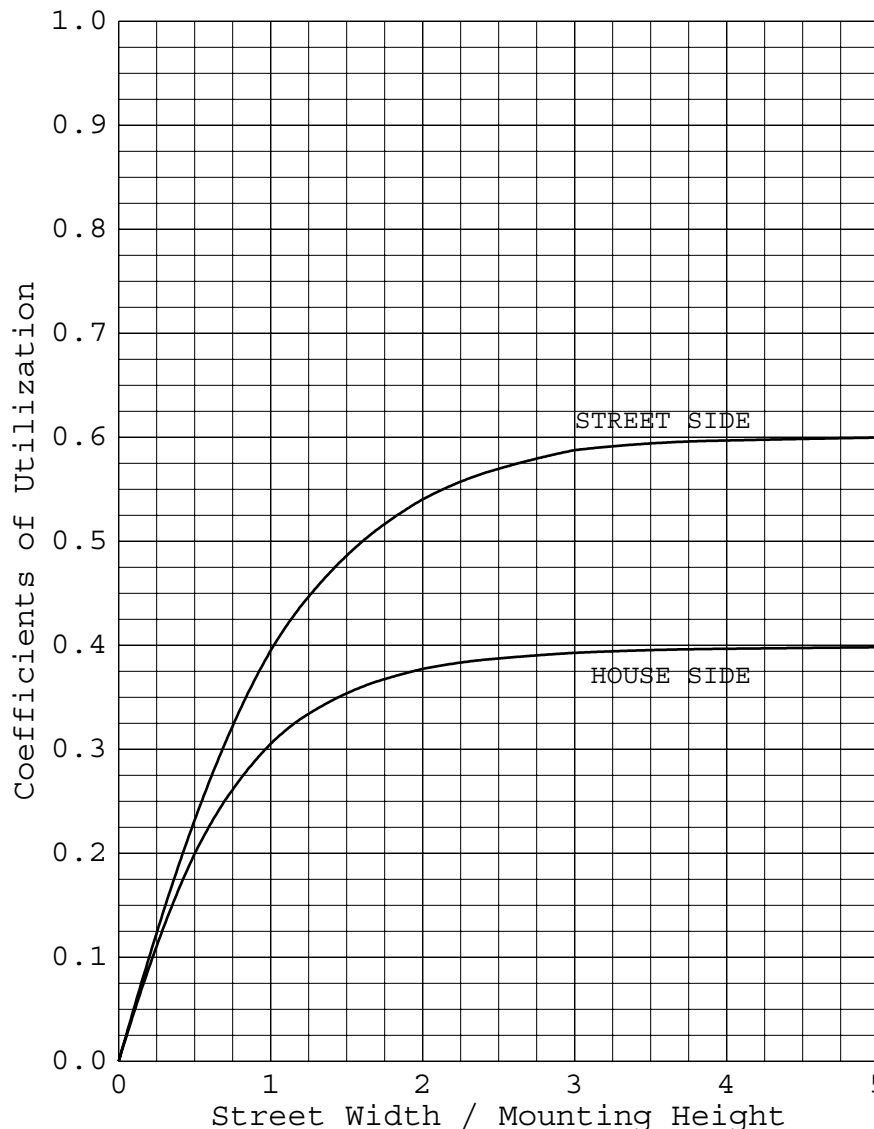




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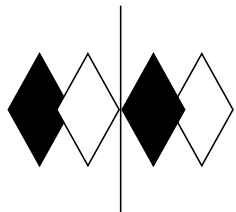
COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	2244	60.1
DOWNWARD HOUSE SIDE	1490	39.9
DOWNWARD TOTAL	3734	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	3734	100.0

EFFICACY = 90.4 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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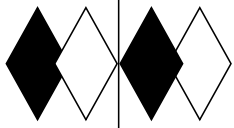
FLUX DISTRIBUTION BY SOLID ANGLE

(PER IESNA TM-15-11, LUMINAIRE CLASSIFICATION
SYSTEM FOR OUTDOOR LUMINAIRES)

	LUMENS	PERCENT OF FIXTURE	BUG ZONE RATINGS
FORWARD LIGHT	2244.	60.1	
FL (0- 30)	345.1	9.2	
FM (30- 60)	1092.5	29.3	
FH (60- 80)	783.5	21.0	G1
FVH(80- 90)	23.1	0.6	G1
BACK LIGHT	1490.	39.9	
BL (0- 30)	291.5	7.8	B1
BM (30- 60)	749.0	20.1	B1
BH (60- 80)	432.5	11.6	B1 G1
BVH(80- 90)	17.0	0.5	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	3734.	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	74.0	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.	3.	3.	2.	2.	2.	2.	2.
	85.0	4.	5.	5.	5.	6.	7.	8.	8.	8.	7.
V	82.5	12.	13.	12.	12.	34.	44.	48.	79.	104.	134.
E	80.0	50.	51.	34.	32.	155.	199.	196.	361.	487.	432.
R	77.5	53.	54.	45.	102.	414.	460.	513.	632.	731.	666.
T	75.0	102.	96.	129.	262.	601.	801.	906.	944.	987.	876.
I	72.5	233.	245.	283.	442.	842.	1012.	1103.	1173.	1213.	1077.
C	71.0<<	310.	322.	381.	618.	920.	1024.	1114.	1186.	1224.	1104.
A	70.0	367.	387.	472.	719.	933.	1022.	1105.	1168.	1199.	1096.
L	67.5	616.	609.	703.	833.	944.	1014.	1071.	1124.	1145.	1060.
	65.0	689.	690.	749.	840.	936.	997.	1052.	1107.	1121.	1062.
A	62.5	691.	697.	749.	836.	926.	989.	1051.	1108.	1120.	1073.
N	60.0	674.	686.	742.	829.	917.	987.	1063.	1130.	1137.	1099.
G	57.5	664.	675.	739.	829.	927.	1028.	1125.	1190.	1178.	1127.
L	55.0	674.	685.	754.	858.	967.	1054.	1149.	1212.	1199.	1140.
E	52.5	664.	670.	725.	814.	912.	992.	1088.	1157.	1156.	1127.
	50.0	654.	663.	714.	796.	895.	985.	1082.	1142.	1129.	1099.
	47.5	660.	666.	716.	797.	888.	993.	1089.	1134.	1116.	1081.
	45.0	667.	674.	719.	799.	892.	1005.	1095.	1127.	1107.	1063.
	42.5	679.	685.	729.	805.	906.	1019.	1096.	1113.	1082.	1032.
	40.0	691.	698.	742.	822.	927.	1027.	1086.	1093.	1050.	997.
	37.5	722.	725.	773.	854.	947.	1025.	1068.	1066.	1012.	959.
	35.0	767.	775.	815.	883.	958.	1017.	1045.	1030.	974.	919.
	30.0	846.	848.	878.	920.	964.	978.	966.	939.	897.	852.
	25.0	888.	892.	907.	918.	921.	904.	880.	851.	819.	792.
	20.0	847.	849.	855.	847.	841.	826.	808.	785.	764.	743.
	15.0	792.	792.	797.	789.	783.	770.	757.	739.	730.	713.
	10.0	747.	747.	749.	744.	739.	728.	718.	713.	706.	695.
	5.0	705.	705.	711.	708.	705.	702.	698.	695.	692.	690.
	0.0	689.	689.	689.	689.	689.	689.	689.	689.	689.	689.

||
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	1.	2.	2.	2.	2.	2.	2.	0.	0.	0.	0.
	85.0	7.	7.	7.	7.	6.	6.	6.	5.	2.	0.	0.
V	82.5	145.	142.	77.	62.	60.	24.	15.	15.	7.	2.	1.
E	80.0	420.	411.	277.	238.	219.	77.	34.	35.	28.	9.	8.
R	77.5	634.	621.	471.	413.	356.	148.	65.	61.	60.	43.	40.
T	75.0	837.	781.	641.	572.	504.	248.	97.	90.	96.	95.	102.
I	72.5	967.	878.	750.	680.	537.	279.	124.	114.	122.	127.	132.
C	71.0<<	1008.	917.	794.	722.	526.	274.	147.	132.	140.	146.	157.
A	70.0	1012.	932.	824.	741.	521.	275.	165.	143.	155.	158.	170.
L	67.5	1007.	949.	862.	783.	538.	307.	230.	186.	187.	186.	187.
	65.0	1023.	973.	903.	831.	580.	381.	317.	255.	227.	232.	235.
A	62.5	1042.	1007.	930.	856.	617.	472.	439.	337.	303.	288.	299.
N	60.0	1071.	1045.	964.	873.	653.	545.	544.	408.	346.	326.	331.
G	57.5	1103.	1075.	992.	891.	688.	537.	564.	455.	368.	334.	336.
L	55.0	1114.	1085.	1006.	917.	722.	497.	485.	428.	355.	309.	309.
E	52.5	1111.	1083.	1003.	907.	729.	486.	394.	373.	340.	317.	318.
	50.0	1079.	1051.	980.	894.	745.	528.	381.	345.	332.	331.	332.
	47.5	1060.	1030.	966.	881.	759.	577.	422.	356.	339.	340.	338.
	45.0	1044.	1016.	953.	870.	772.	618.	470.	384.	358.	352.	350.
	42.5	1012.	991.	930.	857.	776.	649.	516.	423.	382.	373.	373.
	40.0	983.	966.	907.	842.	773.	668.	556.	467.	424.	405.	405.
	37.5	948.	928.	880.	825.	765.	677.	584.	508.	462.	445.	442.
	35.0	911.	890.	850.	805.	754.	680.	606.	541.	502.	482.	480.
	30.0	837.	821.	795.	766.	728.	683.	637.	596.	568.	557.	557.
	25.0	778.	763.	750.	736.	715.	690.	664.	642.	626.	618.	618.
	20.0	733.	726.	721.	716.	709.	697.	686.	674.	666.	662.	665.
	15.0	708.	707.	706.	705.	705.	701.	698.	692.	689.	689.	690.
	10.0	694.	694.	695.	696.	698.	697.	697.	696.	696.	697.	698.
	5.0	690.	690.	691.	690.	693.	693.	695.	694.	694.	696.	697.
	0.0	689.	689.	689.	689.	689.	689.	689.	689.	689.	689.	689.

CONE OF MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	17
5- 10	50
10- 15	86
15- 20	122
20- 25	161
25- 30	200
30- 35	237
35- 40	269
40- 45	295
45- 50	318
50- 55	347
55- 60	376
60- 65	372
65- 70	357
70- 75	311
75- 80	176
80- 85	39
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	67
0- 20	275
0- 30	637
0- 40	1142
0- 50	1755
0- 60	2478
0- 70	3207
0- 80	3694
0- 90	3734
0-100	3734
0-110	3734
0-120	3734
0-130	3734
0-140	3734
0-150	3734
0-160	3734
0-170	3734
0-180	3734



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PAGE: 9 OF 9

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