

REPORT NUMBER: ITL85362

ISSUE DATE: 08/13/15

PAGE: 1 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 36S 0 X 2ES 6 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, 69.4 WATTS, 0.587 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 600mA. 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: 7624

COLOR TEMPERATURE AS MEASURED IN INTEGRATING SPHERE TEST # ITL85370: 3784K

COLOR RENDERING INDEX AS MEASURED IN INTEGRATING SPHERE TEST # ITL85370: 73

LED DC DRIVE CURRENT (mA): 600 (PROVIDED BY CLIENT)

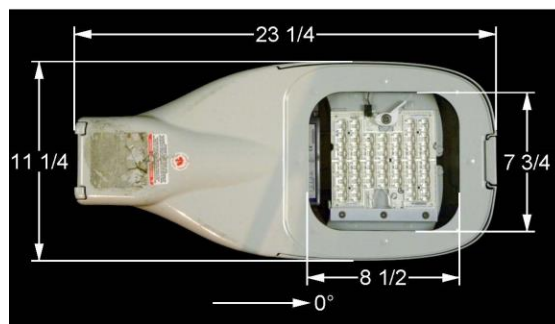
POWER FACTOR: 98.5 %

BUG RATING: B2 U0 G2

LUMINAIRE EFFICACY: 109.9 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	2442	0	2442
STREET SIDE	5181	0	5181
TOTALS	7624	0	7624

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.



itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

PHONE: (303) 442-1255

FAX: (970) 535-3114

E-MAIL: itl@itlboulder.com

WEBSITE: www.itlboulder.com

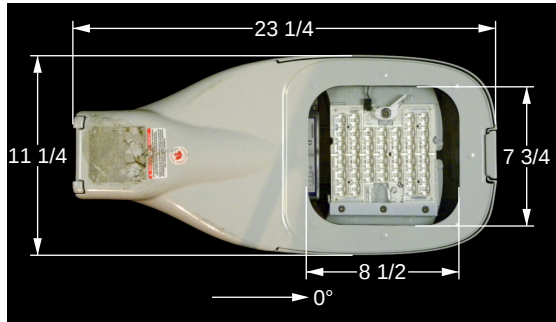
NVLAP
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.

4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 30 foot mounting height.



REPORT NUMBER: ITL85362

ISSUE DATE: 08/13/15

PAGE: 2 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 36S 0 X 2ES 6 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, 69.4

WATTS, 0.587 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 600mA. 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

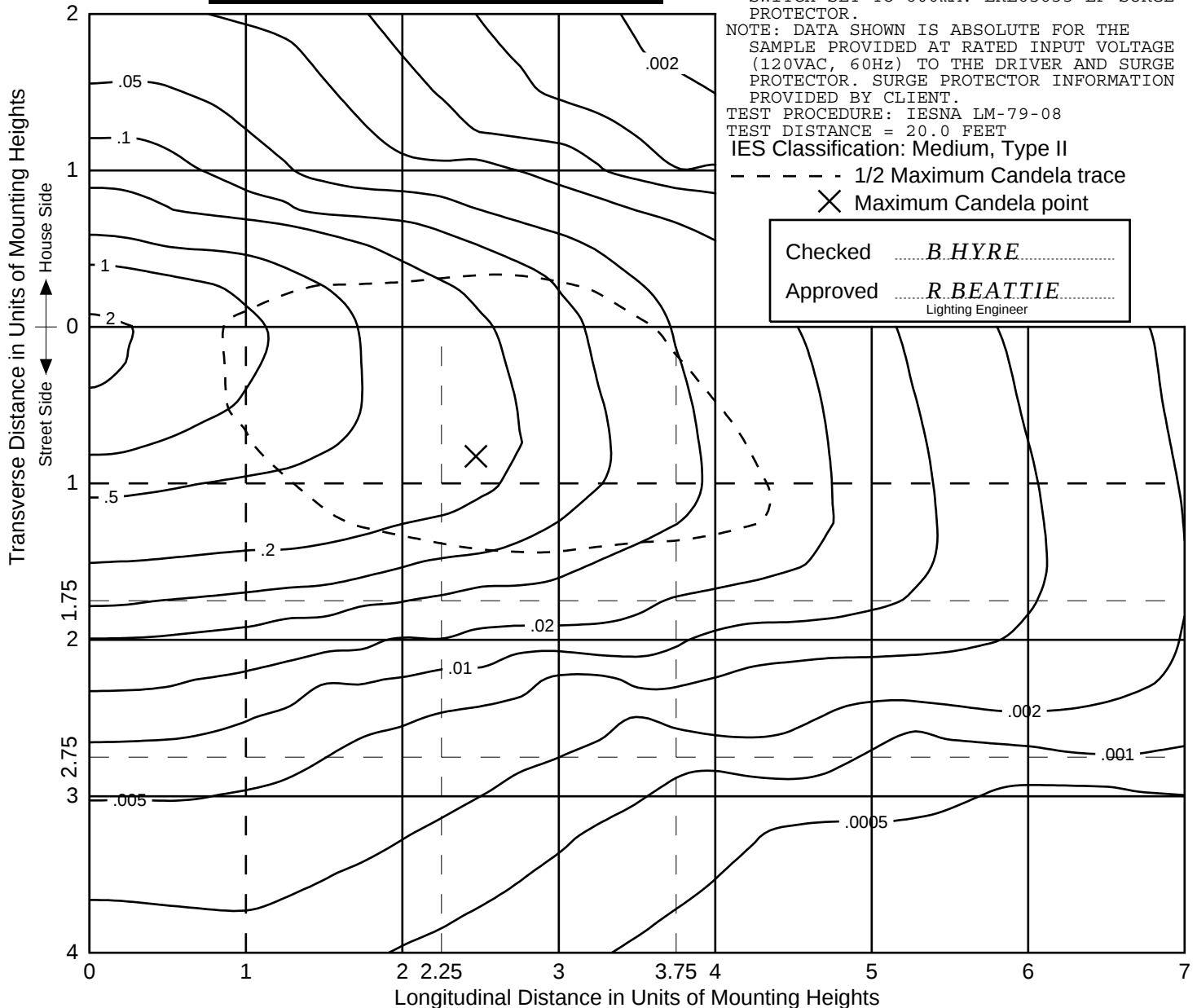
IES Classification: Medium, Type II

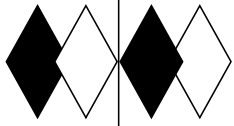
----- 1/2 Maximum Candela trace

X Maximum Candela point

Checked *B. HYRE*

Approved *R. BEATTIE*
Lighting Engineer





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: ITL85362

ISSUE DATE: 08/13/15

PAGE: 3 OF 9

PREPARED FOR: LED ROADWAY LIGHTING LTD.

CATALOG NUMBER: NXT 36S 0 X 2ES 6 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, 69.4
WATTS, 0.587 AMPS

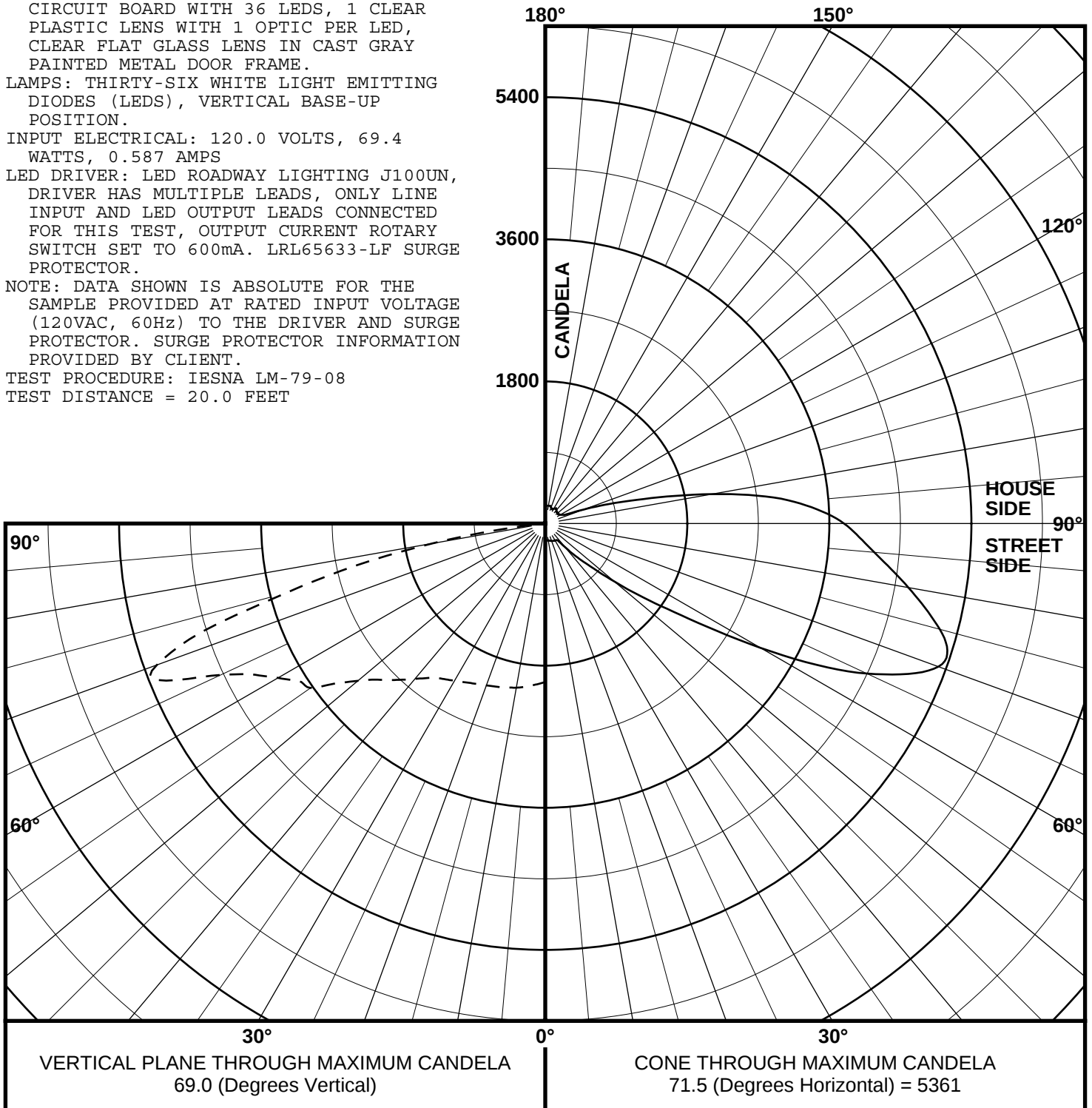
LED DRIVER: LED ROADWAY LIGHTING J100UN,
DRIVER HAS MULTIPLE LEADS, ONLY LINE
INPUT AND LED OUTPUT LEADS CONNECTED
FOR THIS TEST, OUTPUT CURRENT ROTARY
SWITCH SET TO 600mA. LRL65633-LF SURGE
PROTECTOR.

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

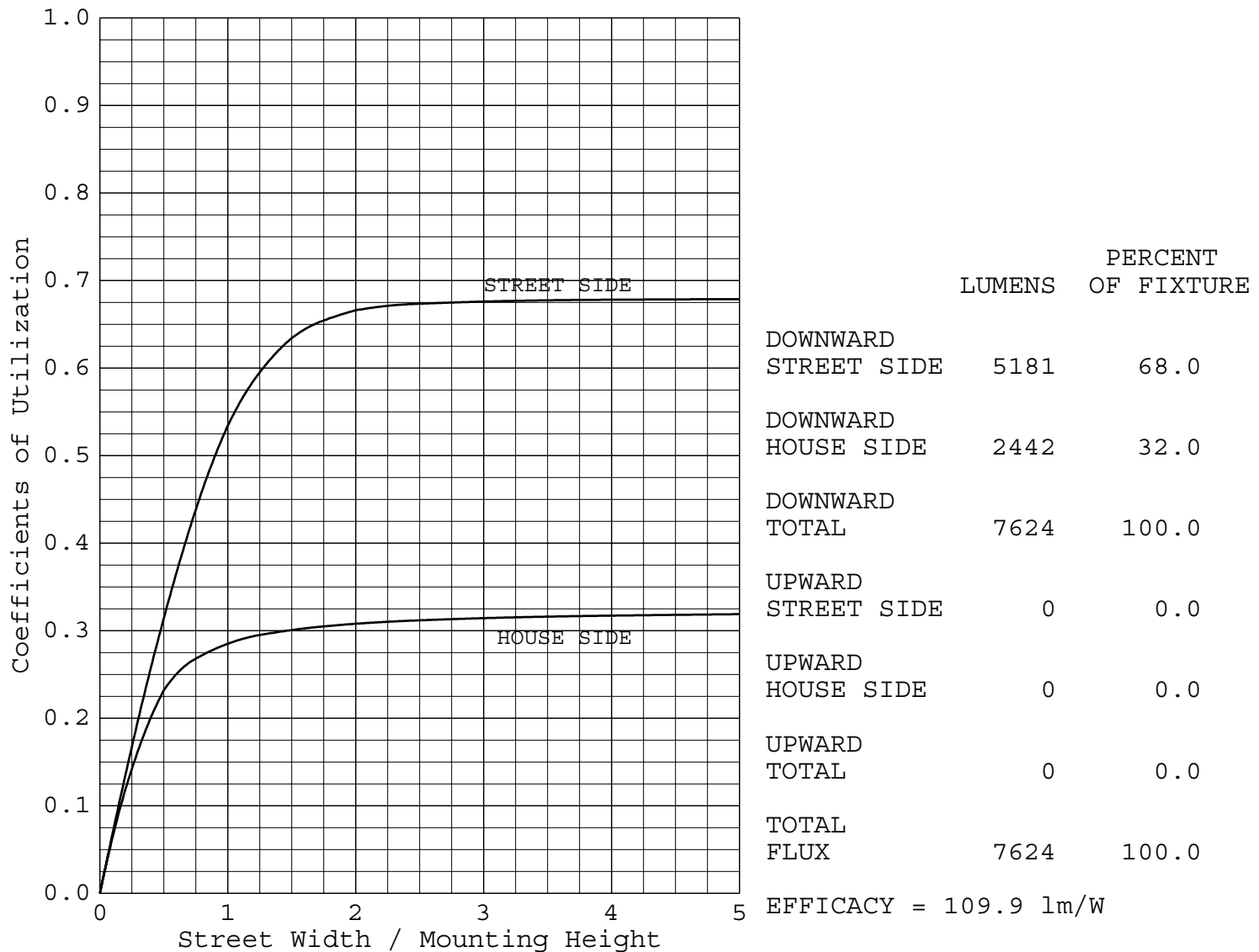




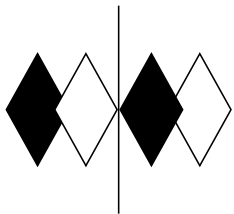
REPORT NUMBER: ITL85362
ISSUE DATE: 08/13/15
PREPARED FOR: LED ROADWAY LIGHTING LTD.

PAGE: 4 OF 9

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.



itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com



INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

REPORT NUMBER: ITL85362
ISSUE DATE: 08/13/15
PREPARED FOR: LED ROADWAY LIGHTING LTD.

PAGE: 5 OF 9

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	5181.	68.0	
FL (0- 30)	911.0	11.9	
FM (30- 60)	2600.5	34.1	
FH (60- 80)	1620.5	21.3	G1
FVH(80- 90)	49.3	0.6	G1
BACK LIGHT	2442.	32.0	
BL (0- 30)	643.3	8.4	B2
BM (30- 60)	1194.5	15.7	B2
BH (60- 80)	583.2	7.6	B2 G2
BVH(80- 90)	21.3	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	7624.	100.0	

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

BUG RATING: B2 U0 G2



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: ITL85362

PAGE: 6 OF 9

ISSUE DATE: 08/13/15

PREPARED FOR: LED ROADWAY LIGHTING LTD.

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	2.	2.	2.	2.	3.	3.	4.	4.	4.	4.
	85.0	11.	11.	15.	14.	11.	12.	13.	16.	74.	85.
V	82.5	29.	29.	42.	36.	27.	34.	32.	72.	536.	376.
E	80.0	54.	55.	76.	55.	52.	62.	64.	224.	1445.	1141.
R	77.5	76.	79.	101.	80.	85.	88.	120.	762.	2450.	2132.
T	75.0	93.	96.	117.	117.	118.	140.	246.	1941.	3400.	2860.
I	72.5	128.	131.	149.	157.	157.	235.	718.	3184.	4558.	3606.
C	70.0	180.	181.	200.	214.	213.	496.	1542.	4199.	5237.	4081.
A	69.0<<	212.	213.	226.	242.	255.	686.	1885.	4495.	5361.	4185.
L	67.5	253.	255.	270.	294.	390.	1049.	2359.	4594.	5198.	4247.
	65.0	349.	353.	396.	492.	791.	1691.	2876.	4268.	4535.	4022.
A	62.5	563.	566.	641.	818.	1224.	2042.	2961.	3925.	4149.	3736.
N	60.0	824.	827.	897.	1086.	1438.	2122.	2881.	3725.	3912.	3846.
G	57.5	1010.	1010.	1070.	1225.	1538.	2133.	2833.	3591.	3711.	3647.
L	55.0	1136.	1138.	1190.	1327.	1626.	2131.	2783.	3536.	3630.	3529.
E	52.5	1239.	1238.	1287.	1426.	1718.	2137.	2708.	3220.	3320.	3282.
	50.0	1326.	1325.	1382.	1522.	1800.	2174.	2660.	3030.	3100.	3095.
	47.5	1412.	1414.	1477.	1612.	1882.	2212.	2593.	2861.	2926.	2956.
	45.0	1495.	1500.	1572.	1714.	1957.	2239.	2520.	2720.	2803.	2839.
	42.5	1594.	1599.	1688.	1851.	2052.	2270.	2476.	2595.	2683.	2734.
	40.0	1757.	1762.	1866.	2003.	2145.	2301.	2408.	2483.	2569.	2620.
	37.5	1978.	1980.	2055.	2137.	2223.	2321.	2322.	2386.	2468.	2517.
	35.0	2167.	2164.	2200.	2238.	2278.	2297.	2237.	2313.	2388.	2439.
	30.0	2336.	2337.	2339.	2326.	2260.	2145.	2144.	2231.	2299.	2327.
	25.0	2304.	2299.	2262.	2187.	2097.	2082.	2117.	2189.	2230.	2235.
	20.0	2105.	2105.	2091.	2087.	2088.	2113.	2144.	2186.	2182.	2164.
	15.0	2135.	2134.	2132.	2142.	2148.	2162.	2185.	2178.	2146.	2126.
	10.0	2198.	2196.	2189.	2196.	2199.	2194.	2177.	2143.	2111.	2090.
	5.0	2191.	2183.	2172.	2167.	2149.	2132.	2112.	2081.	2060.	2049.
	0.0	2007.	2007.	2007.	2007.	2007.	2007.	2007.	2007.	2007.	2007.

||
PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA



itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



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: ITL85362
ISSUE DATE: 08/13/15
PREPARED FOR: LED ROADWAY LIGHTING LTD.

PAGE: 7 OF 9

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.
	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	4.	4.	3.	2.	2.	1.	0.	0.	0.	0.
	85.0	42.	36.	12.	10.	10.	11.	11.	10.	4.	0.
V	82.5	358.	259.	33.	29.	27.	35.	42.	49.	53.	20.
E	80.0	968.	727.	74.	57.	53.	69.	88.	96.	114.	119.
R	77.5	1801.	1381.	164.	94.	87.	105.	134.	156.	191.	213.
T	75.0	2523.	1973.	320.	137.	130.	138.	171.	187.	245.	274.
I	72.5	3271.	2654.	639.	190.	166.	167.	192.	192.	272.	308.
C	70.0	3700.	3078.	994.	243.	195.	196.	221.	195.	238.	248.
A	69.0<<	3786.	3166.	1123.	261.	207.	207.	233.	199.	232.	227.
L	67.5	3841.	3218.	1295.	284.	224.	222.	249.	213.	227.	209.
	65.0	3690.	3167.	1546.	326.	253.	247.	271.	239.	233.	207.
A	62.5	3539.	3140.	1779.	387.	275.	274.	285.	275.	254.	226.
N	60.0	3494.	3169.	1991.	497.	299.	301.	291.	303.	285.	256.
G	57.5	3458.	3205.	2165.	675.	328.	327.	301.	316.	313.	282.
L	55.0	3391.	3192.	2314.	892.	368.	353.	321.	324.	333.	309.
E	52.5	3255.	3066.	2296.	1112.	428.	371.	341.	340.	353.	329.
	50.0	3138.	2977.	2313.	1316.	529.	395.	363.	361.	369.	347.
	47.5	3021.	2895.	2319.	1471.	667.	423.	386.	381.	376.	361.
	45.0	2901.	2804.	2298.	1570.	811.	478.	413.	401.	393.	382.
	42.5	2786.	2693.	2266.	1633.	946.	570.	445.	422.	413.	406.
	40.0	2658.	2584.	2216.	1670.	1061.	671.	502.	448.	433.	424.
	37.5	2542.	2476.	2159.	1691.	1158.	768.	584.	500.	462.	448.
	35.0	2430.	2368.	2099.	1700.	1242.	865.	668.	575.	527.	503.
	30.0	2257.	2192.	1987.	1706.	1387.	1090.	869.	747.	675.	643.
	25.0	2120.	2060.	1906.	1724.	1515.	1307.	1133.	989.	910.	864.
	20.0	2038.	1988.	1872.	1756.	1634.	1499.	1377.	1273.	1208.	1164.
	15.0	2005.	1967.	1880.	1802.	1730.	1658.	1583.	1525.	1483.	1454.
	10.0	1999.	1973.	1915.	1862.	1821.	1779.	1745.	1716.	1699.	1685.
	5.0	2003.	1991.	1961.	1938.	1912.	1888.	1873.	1865.	1857.	1852.
	0.0	2007.	2007.	2007.	2007.	2007.	2007.	2007.	2007.	2007.	2007.

CONE OF MAXIMUM CANDELA



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: ITL85362
ISSUE DATE: 08/13/15
PREPARED FOR: LED ROADWAY LIGHTING LTD.

PAGE: 8 OF 9

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	48
5- 10	143
10- 15	230
15- 20	307
20- 25	377
25- 30	448
30- 35	515
35- 40	570
40- 45	615
45- 50	659
50- 55	703
55- 60	733
60- 65	729
65- 70	690
70- 75	518
75- 80	266
80- 85	68
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	191
0- 20	729
0- 30	1554
0- 40	2639
0- 50	3913
0- 60	5349
0- 70	6768
0- 80	7553
0- 90	7624
0-100	7624
0-110	7624
0-120	7624
0-130	7624
0-140	7624
0-150	7624
0-160	7624
0-170	7624
0-180	7624



itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



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: ITL85362
ISSUE DATE: 08/13/15
PREPARED FOR: LED ROADWAY LIGHTING LTD.

PAGE: 9 OF 9

ADDRESS: 115 CHAIN LAKE DRIVE
SUITE 201
HALIFAX, NOVA SCOTIA, CANADA B3S1B3

THIS ITL REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.