

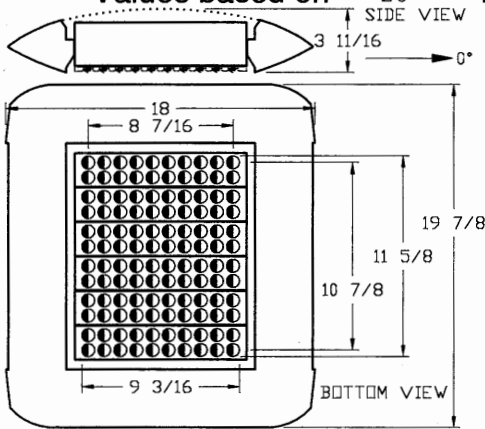


**itl boulder**  
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.  
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

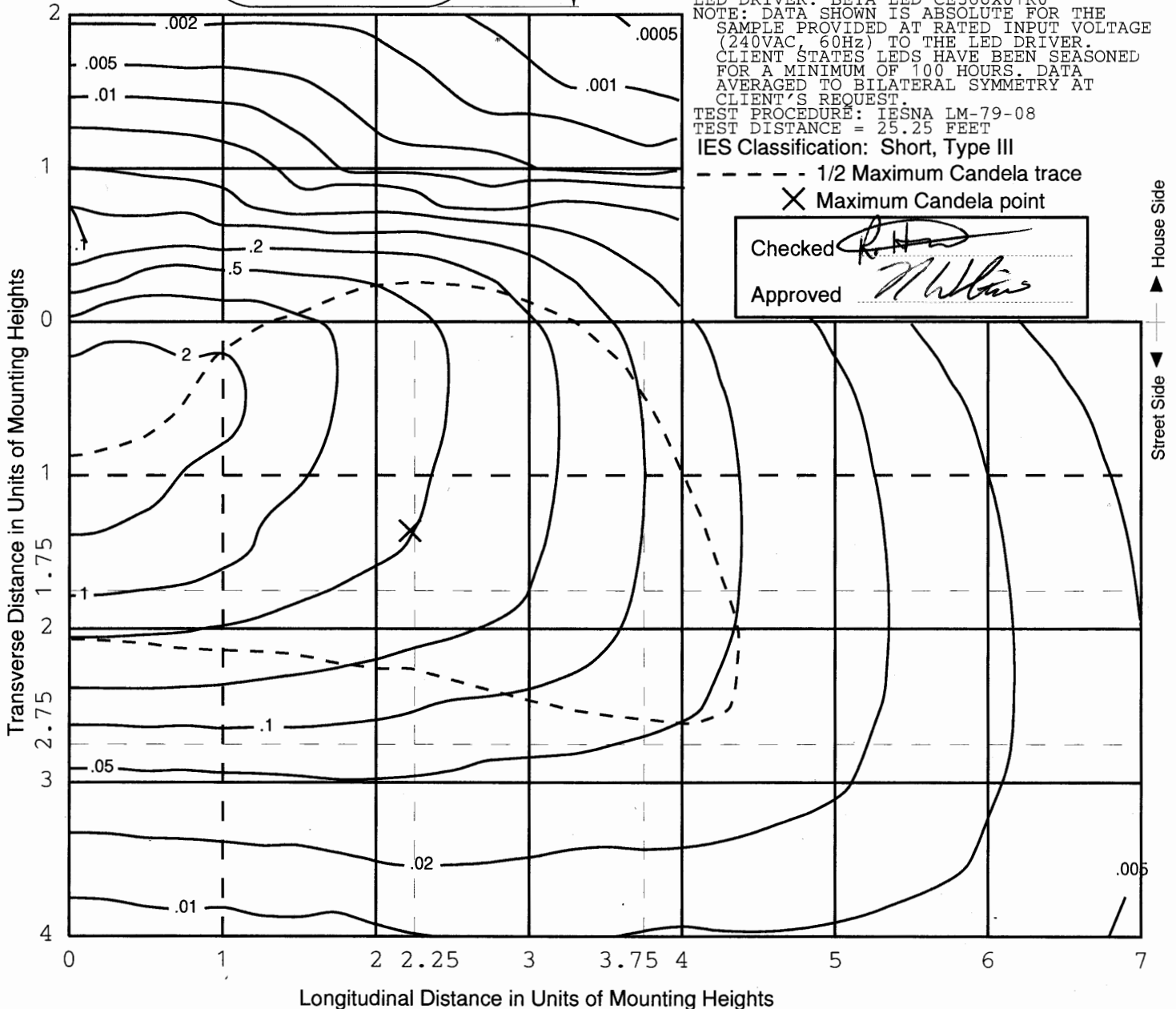
**ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION**  
Values based on 20 foot mounting height.



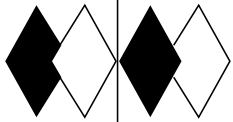
REPORT NUMBER: ITL64565  
DATE: 04/07/10  
PREPARED FOR: BETALED, A DIVISION OF RUUD LIGHTING  
CATALOG NUMBER: ARE-EDG-3MB-\*\*-12-C-UL-BK or BXAL1H12C-UT (350mA)  
LUMINAIRE: EXTRUDED BLACK PAINTED METAL HOUSING, FABRICATED BLACK PAINTED METAL BALLAST MOUNTING PLATE, CAST BLACK PAINTED METAL END CAPS, FORMED PERFORATED METAL TOP, SIX EXTRUDED FINNED METAL HEAT SINKS, EACH HEAT SINK CONTAINS ONE CIRCUIT BOARD WITH 20 LEDs AND CAST BLACK PAINTED METAL TRIM PLATE, ONE CLEAR PLASTIC NON-INTEGRAL LENS BELOW EACH LED, ONE SMALL RUBBER HOUSE SIDE SHIELD BELOW EACH LED.  
LAMPS: ONE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.  
TOTAL INPUT WATTS = 144.8 AT 240.0 VOLTS  
LED DRIVER: BETA LED CE366X01R0  
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (240VAC, 60Hz) TO THE LED DRIVER. CLIENT STATES LEDES HAVE BEEN SEASONED FOR A MINIMUM OF 100 HOURS. DATA AVERAGED TO BILATERAL SYMMETRY AT CLIENT'S REQUEST.  
TEST PROCEDURE: IESNA LM-79-08  
TEST DISTANCE = 25.25 FEET

IES Classification: Short, Type III  
- - - - - 1/2 Maximum Candela trace  
X Maximum Candela point

Checked *[Signature]*  
Approved *[Signature]*



THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.



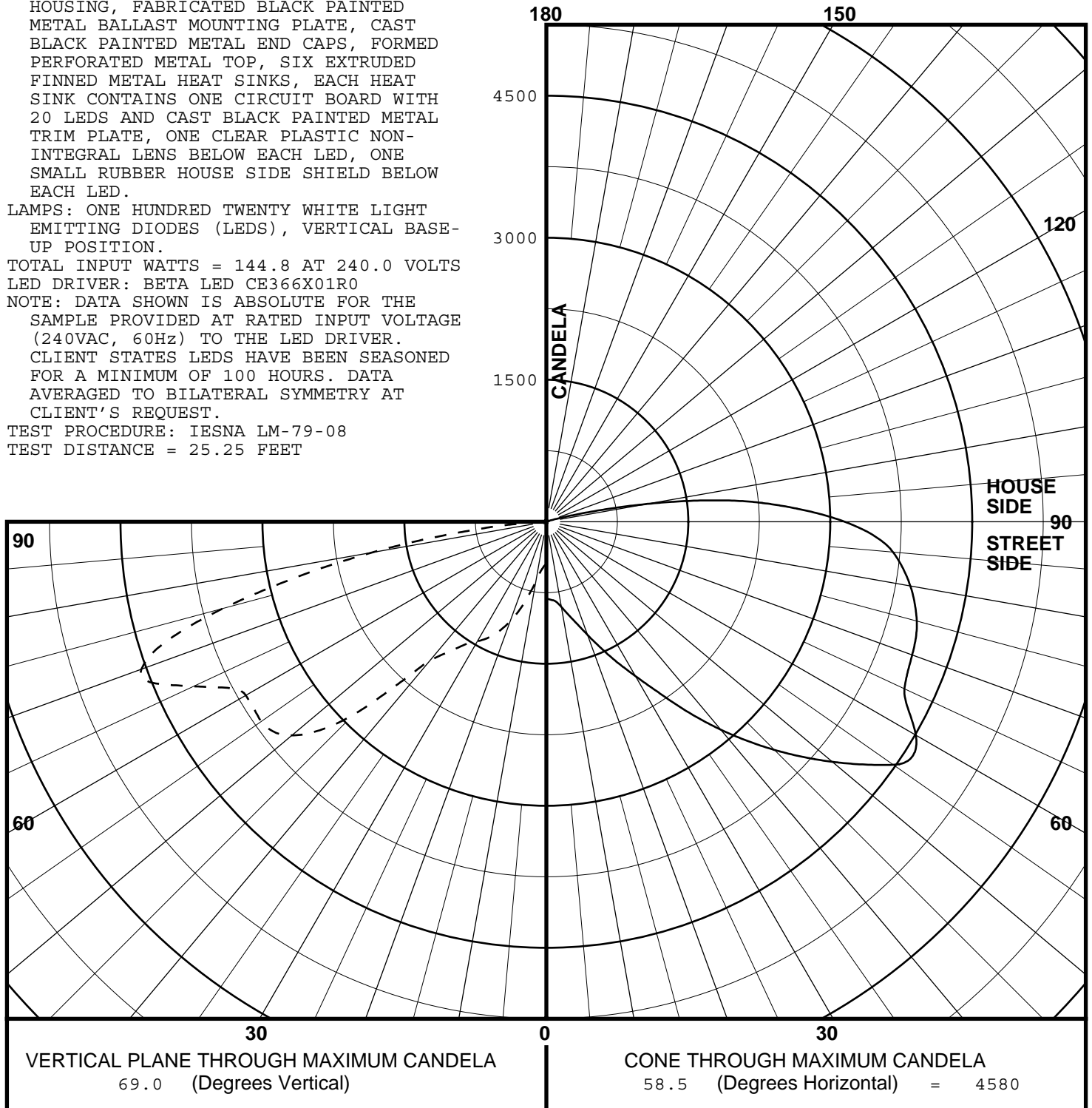
**itl boulder**  
 THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.  
 3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL64565  
 DATE: 04/07/10  
 PREPARED FOR: BETALED, A DIVISION OF RUUD LIGHTING  
 CATALOG NUMBER: ARE-EDG-3MB-\*\*-12-C-UL-BK or BXAL1H12C-UT (350mA)  
 LUMINAIRE: EXTRUDED BLACK PAINTED METAL HOUSING, FABRICATED BLACK PAINTED METAL BALLAST MOUNTING PLATE, CAST BLACK PAINTED METAL END CAPS, FORMED PERFORATED METAL TOP, SIX EXTRUDED FINNED METAL HEAT SINKS, EACH HEAT SINK CONTAINS ONE CIRCUIT BOARD WITH 20 LEDS AND CAST BLACK PAINTED METAL TRIM PLATE, ONE CLEAR PLASTIC NON-INTEGRAL LENS BELOW EACH LED, ONE SMALL RUBBER HOUSE SIDE SHIELD BELOW EACH LED.  
 LAMPS: ONE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.  
 TOTAL INPUT WATTS = 144.8 AT 240.0 VOLTS  
 LED DRIVER: BETA LED CE366X01R0  
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (240VAC, 60Hz) TO THE LED DRIVER. CLIENT STATES LEDS HAVE BEEN SEASONED FOR A MINIMUM OF 100 HOURS. DATA AVERAGED TO BILATERAL SYMMETRY AT CLIENT'S REQUEST.  
 TEST PROCEDURE: IESNA LM-79-08  
 TEST DISTANCE = 25.25 FEET

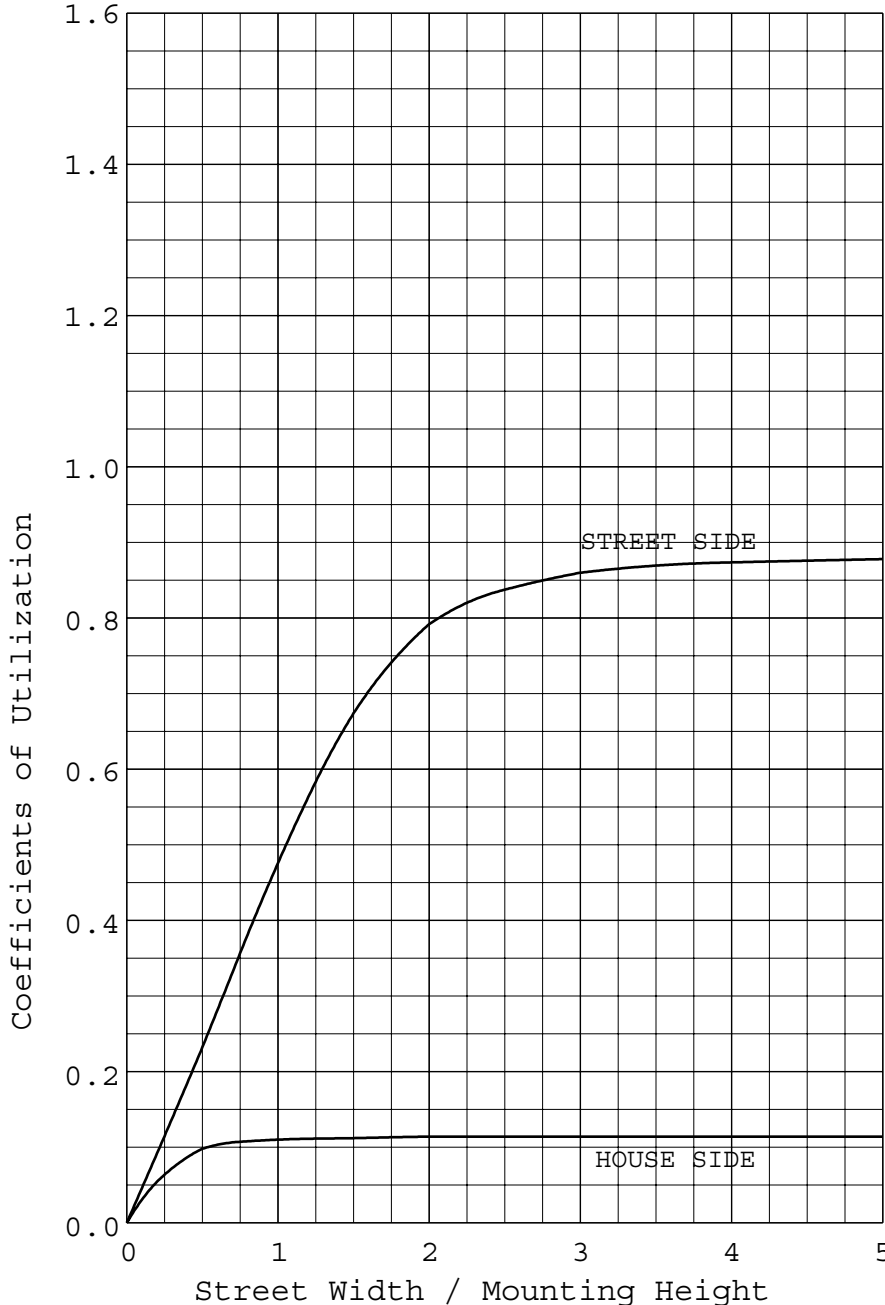
MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA





REPORT NUMBER: ITL64565  
 DATE: 04/07/10  
 PREPARED FOR: BETALED, A DIVISION OF RUUD LIGHTING

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	6222.	88.6
DOWNWARD HOUSE SIDE	801.	11.4
DOWNWARD TOTAL	7023.	100.0
UPWARD STREET SIDE	0.	0.0
UPWARD HOUSE SIDE	0.	0.0
UPWARD TOTAL	0.	0.0
TOTAL FLUX	7023.	100.0
EFFICACY = 48.5 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.



**itl boulder**  
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.  
 3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL64565  
 DATE: 04/07/10  
 PREPARED FOR: BETALED, A DIVISION OF RUUD LIGHTING

FLUX DISTRIBUTION BY SOLID ANGLE  
 (PER IESNA TM-15-07, LUMINAIRE CLASSIFICATION  
 SYSTEM FOR OUTDOOR LUMINAIRES)

	LUMENS	PERCENT OF FIXTURE
FORWARD LIGHT	6222.	88.6
FL ( 0- 30)		6.3
FM ( 30- 60)		44.0
FH ( 60- 80)		36.2
FVH( 80- 90)		2.1
BACK LIGHT	801.	11.4
BL ( 0- 30)		2.0
BM ( 30- 60)		5.5
BH ( 60- 80)		3.8
BVH( 80- 90)		0.1
UPLIGHT	0.	0.0
UL ( 90-100)		0.0
UH (100-180)		0.0
TRAPPED LIGHT	0.	0.0
TOTAL FLUX	7023.	100.0

BACKLIGHT, UPLIGHT, AND GLARE (BUG) RATINGS  
 (PER ADDENDUM A FOR IESNA TM-15-07)

BUG RATING: B1 U2 G2	FIRST DETERMINING SECONDARY SOLID ANGLE*	LUMENS
BACKLIGHT RATING: B1	BH	267.5
UPLIGHT RATING : U2	FVH	149.6
GLARE RATING : G2	FH	2541.7

\* NOTE: OTHER DETERMINING SOLID ANGLES MAY FALL INTO THIS SAME CATEGORY. ONLY THE FIRST DETERMINING ANGLES FROM THE TABLES A1-A3 IN THE ADDENDUM ARE SHOWN.



# itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.  
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL64565

DATE: 04/07/10

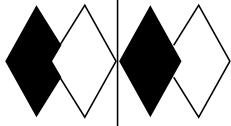
PREPARED FOR: BETALED, A DIVISION OF RUUD LIGHTING

## CANDELA TABULATION

	STREET SIDE				LATERAL ANGLE							
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	58.5	65.0	75.0	85.0	
	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	21.	20.	70.	25.	13.	11.	65.	98.	77.	44.	9.
	85.0	81.	101.	131.	60.	56.	80.	384.	492.	460.	260.	112.
V	82.5	395.	370.	163.	106.	183.	386.	904.	1073.	1002.	680.	409.
E	80.0	349.	324.	191.	163.	358.	677.	1538.	1878.	1777.	1322.	896.
R	77.5	244.	245.	220.	265.	609.	1052.	2274.	2704.	2530.	2008.	1496.
T	75.0	234.	238.	289.	455.	971.	1591.	3122.	3536.	3282.	2767.	2213.
I	72.5	374.	385.	487.	797.	1457.	2337.	3892.	4219.	3877.	3448.	2971.
C	70.0	697.	710.	897.	1344.	2100.	3164.	4382.	4553.	4173.	3912.	3566.
A	69.0<<	810.	833.	1064.	1551.	2327.	3408.	4476.	4580.	4175.	4052.	3677.
L	67.5	1212.	1251.	1553.	2115.	2872.	3793.	4442.	4466.	4159.	4094.	3901.
	65.0	2006.	2034.	2372.	3000.	3603.	4011.	4091.	4112.	3949.	3979.	3895.
A	62.5	2840.	2856.	3146.	3722.	4069.	3789.	3712.	3799.	3686.	3687.	3629.
N	60.0	3583.	3596.	3824.	4220.	4060.	3360.	3550.	3667.	3519.	3339.	3214.
G	57.5	4155.	4157.	4247.	4251.	3625.	3124.	3572.	3668.	3468.	3138.	2839.
L	55.0	4282.	4260.	4131.	3831.	3318.	3107.	3625.	3679.	3445.	3097.	2679.
E	52.5	3863.	3842.	3722.	3519.	3244.	3121.	3603.	3639.	3405.	3055.	2560.
	50.0	3489.	3486.	3481.	3374.	3185.	3052.	3475.	3510.	3300.	2954.	2392.
	47.5	3231.	3245.	3277.	3219.	3085.	2938.	3243.	3266.	3088.	2757.	2152.
	45.0	2841.	2853.	2897.	2881.	2789.	2618.	2846.	2882.	2785.	2473.	1854.
	42.5	2229.	2248.	2310.	2365.	2341.	2175.	2284.	2335.	2343.	2112.	1535.
	40.0	1932.	1951.	2030.	2130.	2126.	1973.	1920.	1914.	1905.	1763.	1355.
	37.5	1786.	1803.	1887.	1987.	1982.	1871.	1793.	1751.	1692.	1581.	1282.
	35.0	1662.	1680.	1755.	1843.	1840.	1761.	1673.	1622.	1550.	1443.	1208.
	30.0	1445.	1451.	1485.	1537.	1555.	1559.	1512.	1458.	1361.	1211.	1070.
	25.0	1337.	1325.	1288.	1303.	1343.	1393.	1363.	1317.	1228.	1043.	908.
	20.0	1172.	1162.	1119.	1117.	1152.	1182.	1150.	1119.	1053.	909.	809.
	15.0	962.	959.	934.	926.	938.	931.	895.	874.	831.	755.	703.
	10.0	713.	712.	710.	703.	687.	669.	647.	638.	624.	602.	577.
	5.0	499.	499.	498.	496.	497.	497.	497.	498.	497.	492.	482.
	0.0	448.	448.	448.	448.	448.	448.	448.	448.	448.	448.	448.

||  
PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA



# itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.  
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL64565

DATE: 04/07/10

PREPARED FOR: BETALED, A DIVISION OF RUUD LIGHTING

## 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	7.	5.	5.	5.	4.	2.	1.	0.	0.	0.	0.
85.0	60.	12.	8.	8.	6.	2.	1.	0.	0.	0.	0.
V 82.5	246.	53.	16.	10.	7.	3.	1.	0.	0.	0.	0.
E 80.0	625.	244.	27.	12.	8.	4.	1.	0.	0.	0.	0.
R 77.5	1155.	712.	41.	15.	10.	6.	2.	1.	0.	0.	0.
T 75.0	1777.	1202.	65.	19.	14.	9.	4.	2.	1.	0.	0.
I 72.5	2460.	1718.	104.	23.	18.	13.	6.	3.	1.	1.	1.
C 70.0	3047.	2208.	169.	29.	23.	18.	8.	4.	2.	1.	1.
A 69.0<<	3153.	2287.	175.	30.	25.	19.	9.	5.	2.	2.	2.
L 67.5	3416.	2558.	264.	36.	30.	23.	12.	6.	3.	2.	2.
65.0	3506.	2718.	373.	45.	36.	30.	17.	9.	6.	5.	5.
A 62.5	3346.	2702.	475.	56.	45.	37.	24.	13.	10.	8.	8.
N 60.0	2994.	2480.	539.	69.	57.	45.	31.	19.	14.	12.	12.
G 57.5	2623.	2187.	571.	88.	72.	52.	39.	26.	20.	17.	17.
L 55.0	2447.	2049.	624.	110.	91.	61.	46.	34.	26.	23.	22.
E 52.5	2309.	1940.	678.	135.	112.	72.	53.	42.	34.	30.	30.
50.0	2114.	1783.	716.	163.	135.	84.	60.	49.	43.	40.	39.
47.5	1870.	1590.	743.	194.	154.	99.	68.	56.	51.	49.	49.
45.0	1578.	1365.	754.	228.	167.	113.	76.	64.	59.	58.	58.
42.5	1299.	1170.	769.	268.	173.	122.	84.	73.	68.	66.	66.
40.0	1187.	1107.	791.	312.	168.	124.	91.	82.	76.	74.	73.
37.5	1139.	1070.	807.	350.	155.	119.	93.	86.	81.	78.	78.
35.0	1090.	1022.	818.	387.	147.	107.	90.	85.	82.	79.	79.
30.0	1008.	949.	799.	456.	183.	82.	71.	68.	68.	68.	69.
25.0	877.	853.	745.	504.	276.	116.	58.	48.	46.	46.	45.
20.0	778.	758.	710.	553.	361.	220.	120.	64.	46.	42.	41.
15.0	682.	663.	631.	574.	449.	325.	234.	169.	135.	115.	108.
10.0	566.	555.	529.	503.	467.	416.	355.	303.	270.	254.	253.
5.0	476.	470.	459.	446.	432.	419.	407.	396.	388.	384.	385.
0.0	448.	448.	448.	448.	448.	448.	448.	448.	448.	448.	448.

CONE OF MAXIMUM CANDELA