

itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

PHONE: (303) 442-1255

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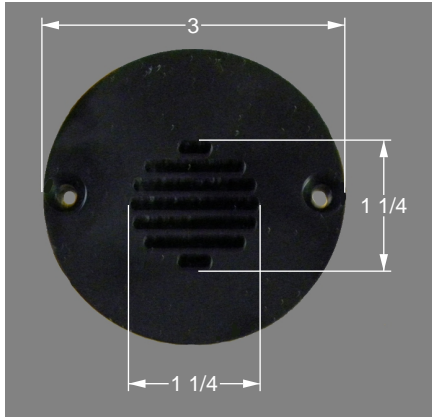
NVLAP
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.

4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 1 foot mounting height.



REPORT NUMBER: ITL86657

ISSUE DATE: 02/25/16

PAGE: 1 OF 8

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: CHL-LED-e69-C-0-DEGREES,
YSL-LED-e69-C-0-DEGREES

LUMINAIRE: MACHINED CYLINDRICAL METAL HOUSING, ONE BLACK CIRCUIT BOARD WITH 3 LEDS, ONE CLEAR PRISMATIC PLASTIC LENS WITH ONE CONICAL OPTIC PER LED, CLEAR FLAT LINEAR PRISMATIC GLASS LENS, MACHINED BLACK PAINTED LOUVERED METAL FACEPLATE, LENS PRISMS OUT AND VERTICAL.

LAMPS: THREE WHITE LIGHT EMITTING DIODES (LEDs), AIMED AT THE HORIZON.

INPUT ELECTRICAL: 12.0 VOLTS, 6.25 WATTS, 0.578 AMPS

LED DRIVER: B-K LIGHTING 524438/400188-L, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (12VAC, 60Hz) TO THE DRIVER.

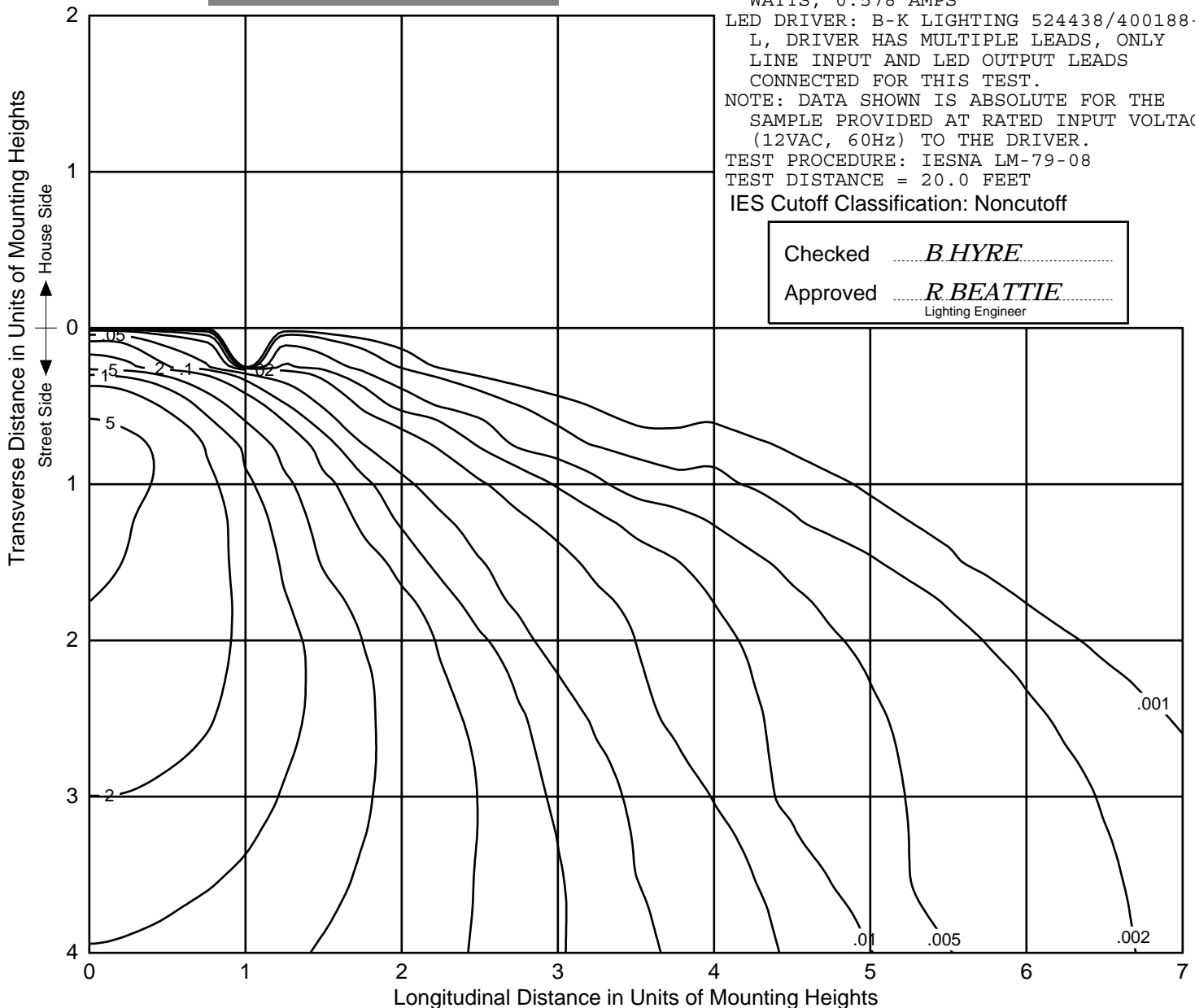
TEST PROCEDURE: IESNA LM-79-08

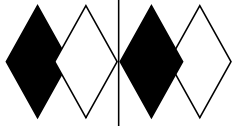
TEST DISTANCE = 20.0 FEET

IES Cutoff Classification: Noncutoff

Checked B. HYRE

Approved R. BEATTIE
Lighting Engineer





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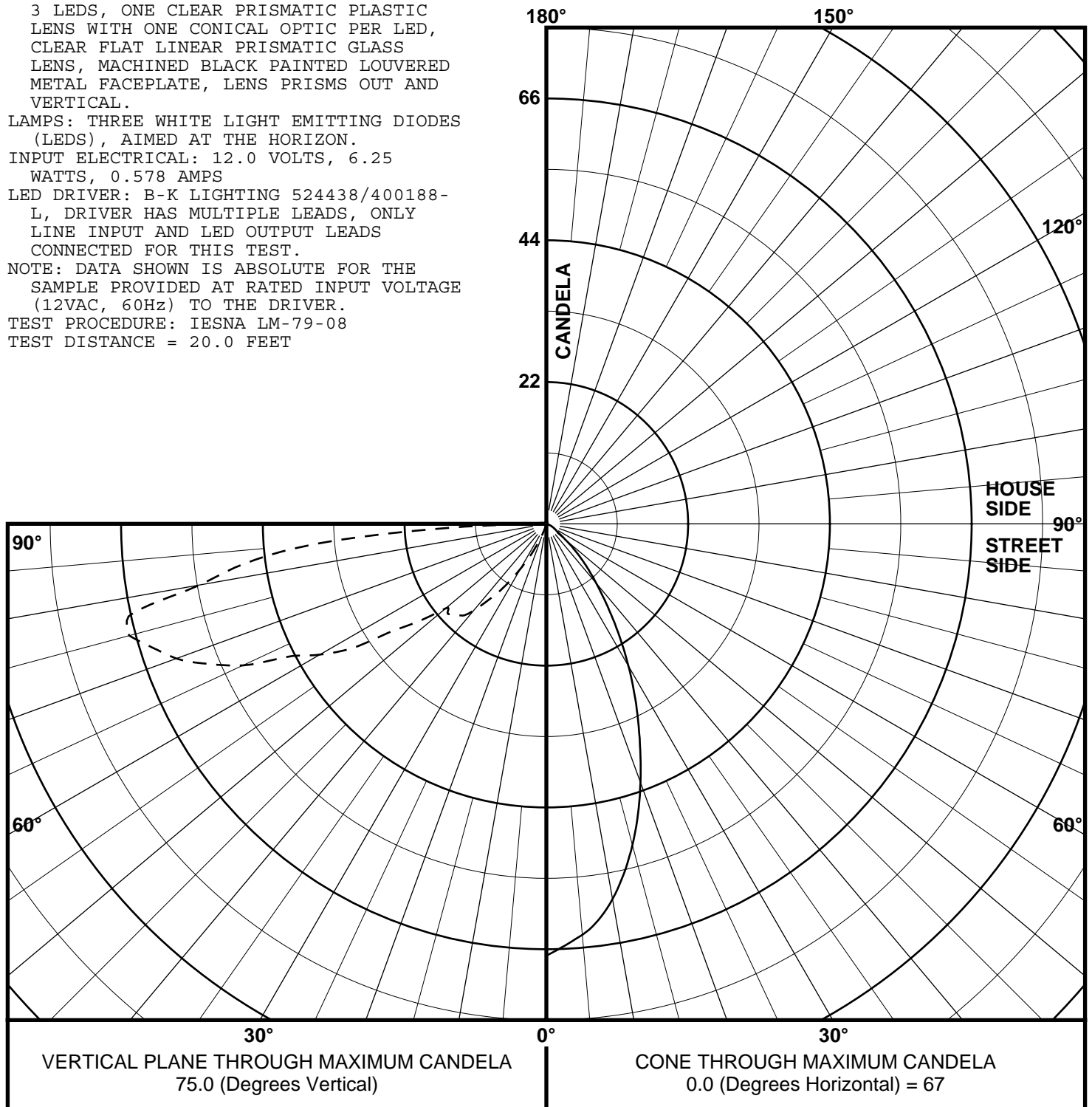
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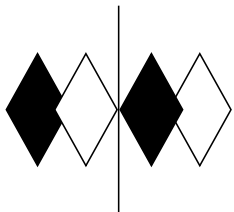
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CATALOG NUMBER: CHL-LED-e69-C-0-DEGREES,
YSL-LED-e69-C-0-DEGREES
LUMINAIRE: MACHINED CYLINDRICAL METAL
HOUSING, ONE BLACK CIRCUIT BOARD WITH
3 LEDS, ONE CLEAR PRISMATIC PLASTIC
LENS WITH ONE CONICAL OPTIC PER LED,
CLEAR FLAT LINEAR PRISMATIC GLASS
LENS, MACHINED BLACK PAINTED LOUVERED
METAL FACEPLATE, LENS PRISMS OUT AND
VERTICAL.
LAMPS: THREE WHITE LIGHT EMITTING DIODES
(LEDS), AIMED AT THE HORIZON.
INPUT ELECTRICAL: 12.0 VOLTS, 6.25
WATTS, 0.578 AMPS
LED DRIVER: B-K LIGHTING 524438/400188-
L, DRIVER HAS MULTIPLE LEADS, ONLY
LINE INPUT AND LED OUTPUT LEADS
CONNECTED FOR THIS TEST.
NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED AT RATED INPUT VOLTAGE
(12VAC, 60Hz) TO THE DRIVER.
TEST PROCEDURE: IESNA LM-79-08
TEST DISTANCE = 20.0 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

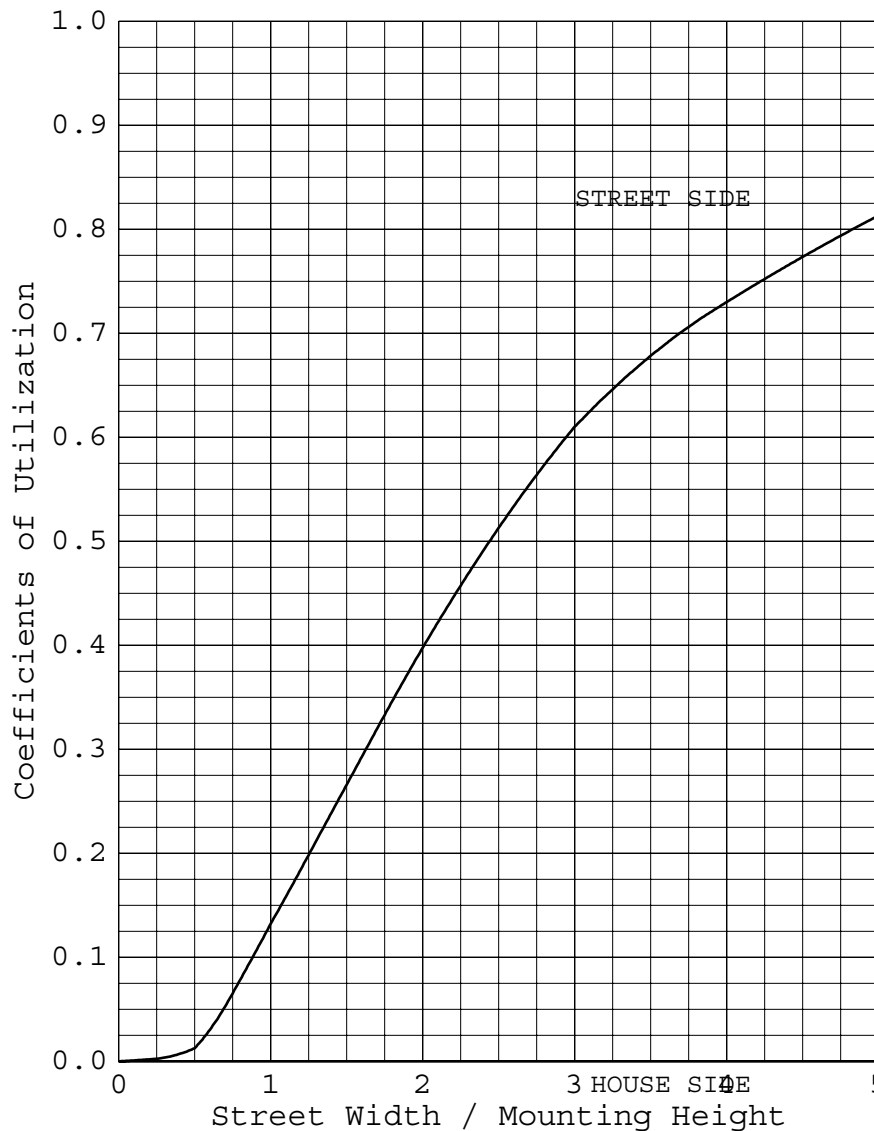




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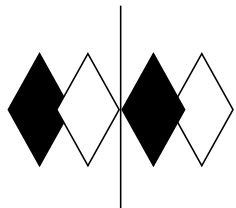
COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	32.6	98.8
DOWNWARD HOUSE SIDE	0.0	0.0
DOWNWARD TOTAL	32.6	98.8
UPWARD STREET SIDE	0.4	1.2
UPWARD HOUSE SIDE	0.0	0.0
UPWARD TOTAL	0.4	1.2
TOTAL FLUX	33.0	100.0

EFFICACY = 5.3 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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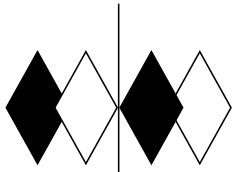
FLUX DISTRIBUTION BY SOLID ANGLE

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

	LUMENS	PERCENT OF FIXTURE	BUG ZONE RATINGS
FORWARD LIGHT	32.6	98.8	
FL (0- 30)	0.4	1.2	
FM (30- 60)	9.1	27.7	
FH (60- 80)	17.9	54.1	G0
FVH(80- 90)	5.2	15.9	G0
BACK LIGHT	0.0	0.0	
BL (0- 30)	0.0	0.0	B0
BM (30- 60)	0.0	0.0	B0
BH (60- 80)	0.0	0.0	B0 G0
BVH(80- 90)	0.0	0.0	G0
UPLIGHT	0.4	1.2	
UL (90-100)	0.2	0.7	U1
UH (100-180)	0.1	0.4	U1
TRAPPED LIGHT	0.0	0.0	
TOTAL FLUX	33.0	100.0	

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

BUG RATING: B0 U1 G0



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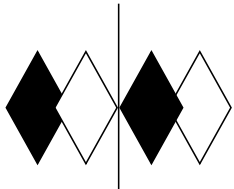
PAGE: 5 OF 8

CANDELA TABULATION

	STREET	SIDE	LATERAL ANGLE									
		0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0
	180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	145.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	125.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	115.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	105.0	0.6	0.6	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0
	95.0	1.2	1.3	1.1	0.8	0.5	0.3	0.1	0.0	0.0	0.0	0.0
	92.5	1.3	1.4	1.2	0.9	0.6	0.3	0.1	0.0	0.0	0.0	0.0
	90.0	1.6	1.6	1.4	1.1	0.7	0.3	0.2	0.1	0.0	0.0	0.0
	87.5	16.5	16.6	12.3	8.2	3.9	1.6	0.5	0.3	0.0	0.0	0.0
	85.0	36.1	33.5	27.2	16.9	9.3	3.4	0.9	0.5	0.1	0.0	0.0
V	82.5	47.2	46.2	42.4	24.1	12.7	4.5	1.2	0.7	0.1	0.0	0.0
E	80.0	54.6	55.5	45.3	29.0	14.8	5.8	1.5	0.9	0.2	0.0	0.0
R	77.5	66.4	62.0	47.1	31.6	16.4	6.9	1.8	1.0	0.2	0.0	0.0
T	76.0	67.0	63.6	50.2	33.0	17.4	7.4	1.9	1.0	0.2	0.0	0.0
I	75.0<<	67.0	64.0	51.6	33.7	18.0	7.7	2.0	0.9	0.1	0.0	0.0
C	72.5	64.0	63.1	50.9	33.3	18.5	7.9	2.1	0.8	0.1	0.0	0.0
A	70.0	61.1	60.2	51.2	32.4	18.1	7.7	2.0	0.7	0.1	0.0	0.0
L	67.5	56.8	55.0	45.3	29.4	16.6	6.8	1.9	0.7	0.1	0.0	0.0
	65.0	52.0	49.3	39.5	26.4	14.3	5.9	2.0	0.6	0.1	0.0	0.0
A	62.5	44.4	44.0	35.3	23.5	12.8	5.8	2.2	0.6	0.1	0.0	0.0
N	60.0	40.6	39.1	31.2	21.2	12.2	6.0	2.4	0.6	0.1	0.0	0.0
G	57.5	36.1	33.9	27.0	19.5	12.0	6.1	2.7	0.7	0.1	0.0	0.0
L	55.0	28.7	28.6	24.5	18.7	11.5	5.8	2.7	0.7	0.1	0.0	0.0
E	52.5	24.7	24.1	21.5	16.4	10.7	6.1	2.8	0.7	0.1	0.0	0.0
	50.0	20.4	20.6	19.3	15.0	10.4	6.1	2.7	0.7	0.0	0.0	0.0
	47.5	20.7	20.1	18.4	14.6	10.5	5.9	2.6	0.7	0.0	0.0	0.0
	45.0	20.0	19.7	17.8	14.4	9.9	5.5	2.3	0.5	0.0	0.0	0.0
	42.5	19.3	18.9	17.2	13.5	9.0	5.1	2.1	0.4	0.0	0.0	0.0
	40.0	17.6	17.3	15.2	12.0	8.0	4.4	1.7	0.4	0.0	0.0	0.0
	37.5	15.1	14.8	13.1	10.4	7.0	3.8	1.4	0.3	0.0	0.0	0.0
	35.0	12.9	12.5	11.1	8.7	5.9	3.1	1.0	0.2	0.0	0.0	0.0
	30.0	8.1	8.0	7.1	5.4	3.4	1.6	0.5	0.1	0.0	0.0	0.0
	25.0	4.1	4.0	3.5	2.4	1.5	0.7	0.2	0.1	0.0	0.0	0.0
	20.0	1.4	1.3	1.1	0.8	0.5	0.3	0.1	0.1	0.0	0.0	0.0
	15.0	0.4	0.3	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
	10.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

||
PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA



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CANDELA TABULATION

	HOUSE SIDE					LATERAL ANGLE				
	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	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V 82.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E 80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R 77.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
T 76.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I 75.0<<	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C 72.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A 70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
L 67.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A 62.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N 60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G 57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
L 55.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E 52.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CONE OF MAXIMUM CANDELA



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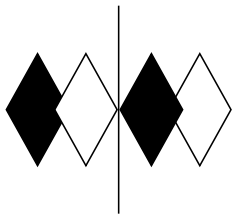
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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	0.0
5- 10	0.0
10- 15	0.0
15- 20	0.0
20- 25	0.1
25- 30	0.3
30- 35	0.6
35- 40	0.9
40- 45	1.3
45- 50	1.6
50- 55	2.0
55- 60	2.6
60- 65	3.4
65- 70	4.4
70- 75	5.1
75- 80	5.0
80- 85	3.8
85- 90	1.4
90- 95	0.1
95-100	0.1
100-105	0.1
105-110	0.0
110-115	0.0
115-120	0.0
120-125	0.0
125-130	0.0
130-135	0.0
135-140	0.0
140-145	0.0
145-150	0.0
150-155	0.0
155-160	0.0
160-165	0.0
165-170	0.0
170-175	0.0
175-180	0.0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	0.0
0- 20	0.0
0- 30	0.4
0- 40	1.9
0- 50	4.9
0- 60	9.5
0- 70	17.3
0- 80	27.4
0- 90	32.6
0-100	32.9
0-110	33.0
0-120	33.0
0-130	33.0
0-140	33.0
0-150	33.0
0-160	33.0
0-170	33.0
0-180	33.0



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ADDRESS: 40429 BRICKYARD DRIVE
MADERA, CA 93636-9515

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