



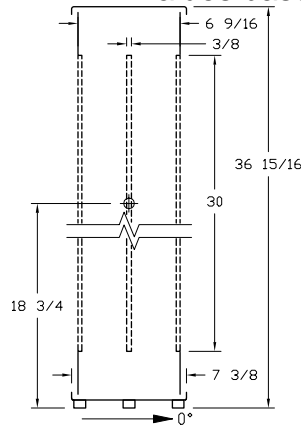
**itl boulder**  
 THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

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

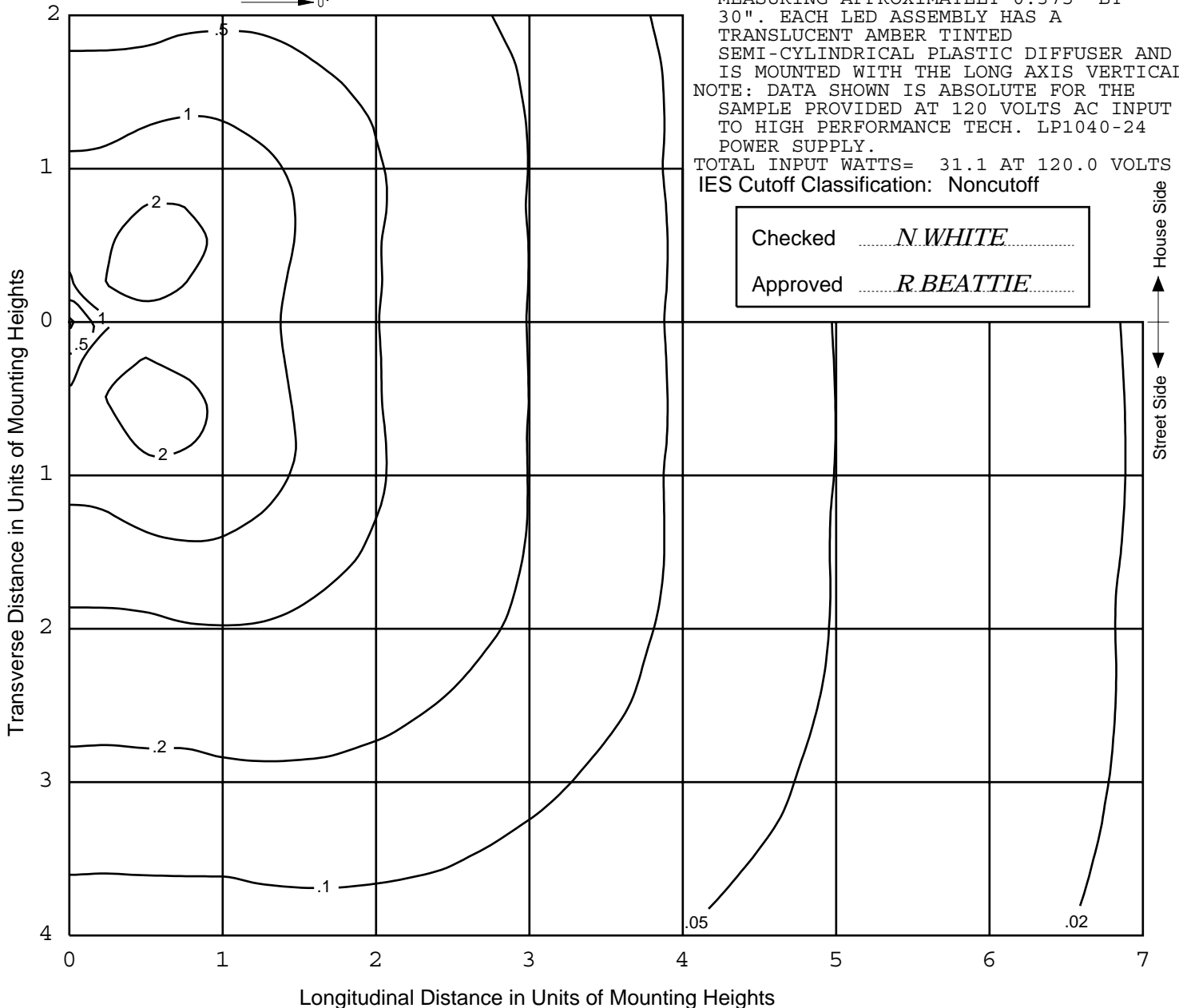
PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

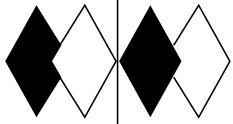
**ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION**

Values based on 1.56 foot mounting height.



REPORT NUMBER: ITL56915  
 DATE: 11/17/05  
 PREPARED FOR: FAIRWEATHER SITE  
 FURNISHINGS, A DIVISION OF LEADER  
 MANUFACTURING, INC.  
 CATALOG NUMBER: EA-1R-L ALUMINUM LED  
 BOLLARD WITH 30" LED  
 LUMINAIRE: EXTRUDED UNFINISHED  
 CYLINDRICAL ALUMINUM HOUSING WITH  
 FABRICATED UNFINISHED ALUMINUM END  
 CAPS AND FOUR RECESSED SLOTS AROUND  
 OUTER CIRCUMFERENCE MEASURING  
 APPROXIMATELY 0.3125" BY 30". EACH  
 SLOT CONTAINS ONE LED ASSEMBLY  
 INSERTED FROM END OF HOUSING.  
 LAMPS: FOUR ILIGHT PN24W1-65 WHITE  
 LIGHT EMITTING DIODE (LED) ASSEMBLIES  
 MEASURING APPROXIMATELY 0.375" BY  
 30". EACH LED ASSEMBLY HAS A  
 TRANSLUCENT AMBER TINTED  
 SEMI-CYLINDRICAL PLASTIC DIFFUSER AND  
 IS MOUNTED WITH THE LONG AXIS VERTICAL.  
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE  
 SAMPLE PROVIDED AT 120 VOLTS AC INPUT  
 TO HIGH PERFORMANCE TECH. LP1040-24  
 POWER SUPPLY.  
 TOTAL INPUT WATTS= 31.1 AT 120.0 VOLTS  
 IES Cutoff Classification: Noncutoff





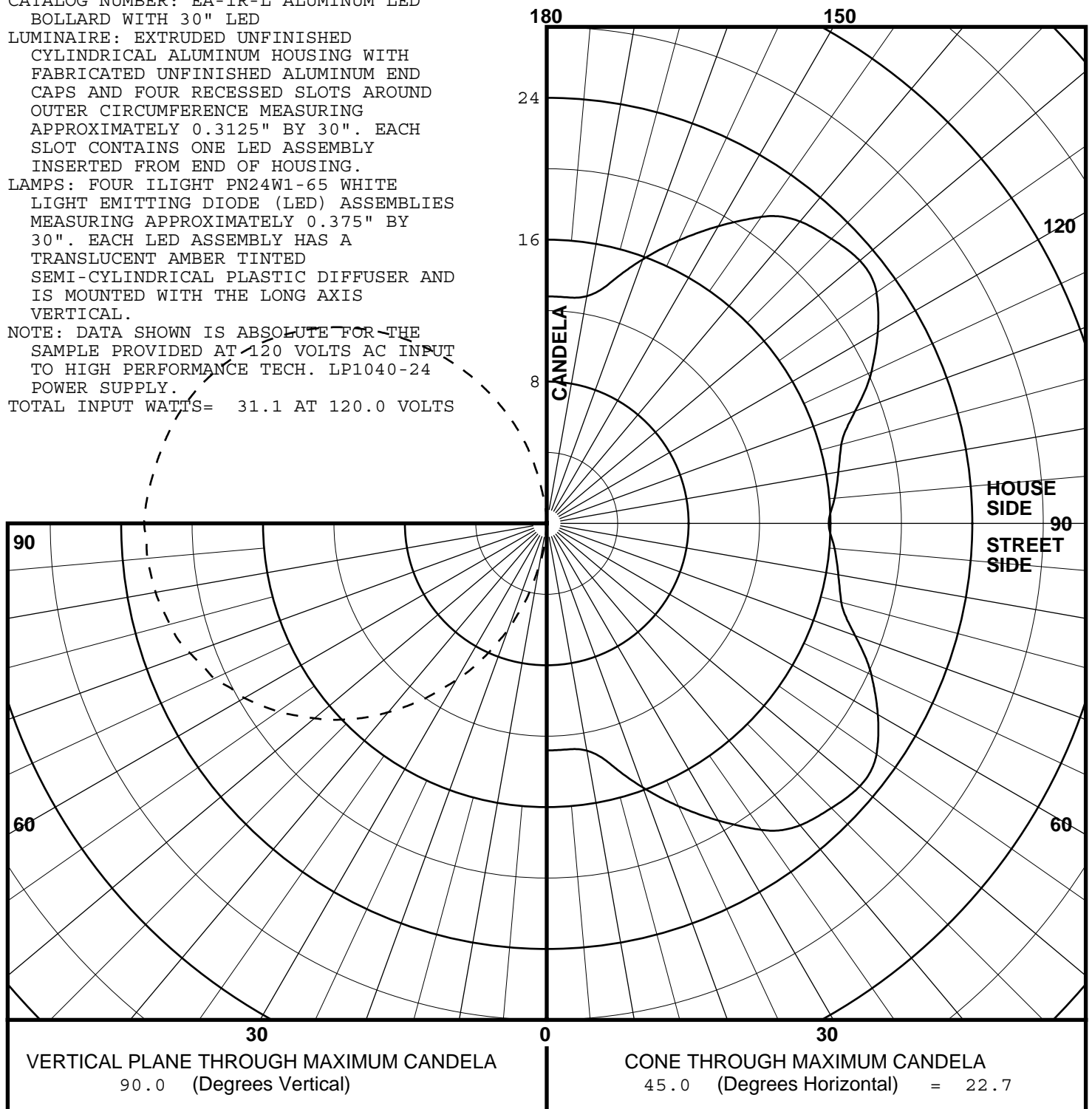
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 SAMPLE PROVIDED AT 120 VOLTS AC INPUT  
 TO HIGH PERFORMANCE TECH. LP1040-24  
 POWER SUPPLY.  
 TOTAL INPUT WATTS= 31.1 AT 120.0 VOLTS

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA



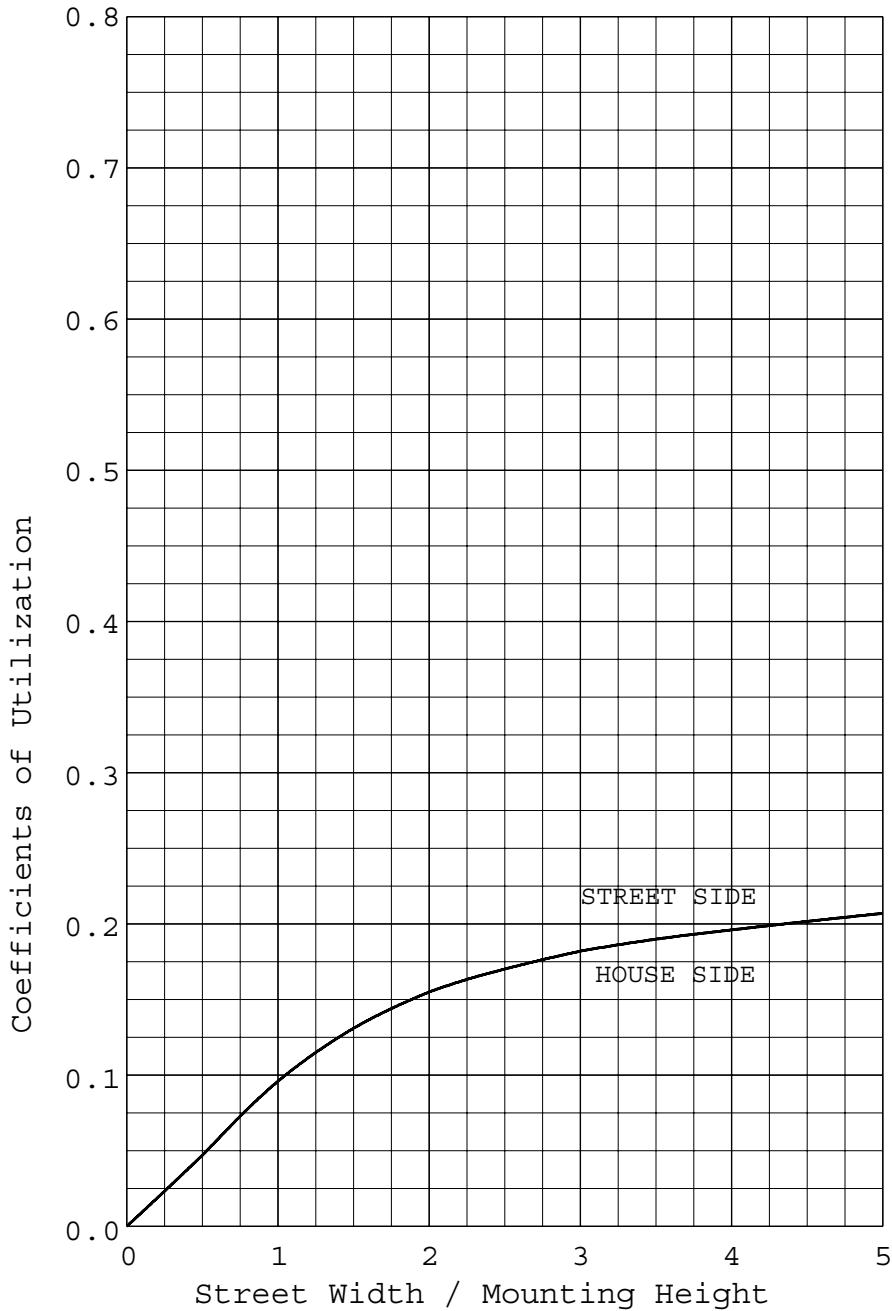


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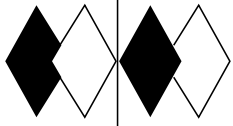
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 MANUFACTURING, INC.  
 COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS
DOWNWARD STREET SIDE	44
DOWNWARD HOUSE SIDE	44
DOWNWARD TOTAL	88
UPWARD STREET SIDE	44
UPWARD HOUSE SIDE	44
UPWARD TOTAL	88
TOTAL FLUX	176

ALL CANDELA, LUMENS AND COEFFICIENT OF UTILIZATION VALUES IN THIS REPORT ARE BASED ON RELATIVE PHOTOMETRY WHICH ASSUMES A BALLAST FACTOR OF 1.00. ANY CALCULATIONS PREPARED FROM THESE DATA SHOULD INCLUDE AN APPROPRIATE BALLAST FACTOR.



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CANDELA TABULATION

	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.
175.0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
165.0	3.	2.	2.	3.	4.	5.	5.	4.	3.	3.	3.
155.0	4.	4.	5.	6.	8.	9.	8.	7.	6.	5.	5.
145.0	6.	6.	7.	9.	11.	12.	12.	10.	8.	8.	8.
135.0	8.	8.	9.	12.	15.	16.	16.	14.	11.	10.	10.
125.0	10.	10.	11.	14.	17.	18.	18.	16.	13.	13.	12.
115.0	11.	11.	12.	16.	19.	21.	21.	18.	15.	14.	14.
105.0	12.	12.	14.	17.	20.	22.	22.	19.	17.	16.	15.
95.0	13.	13.	14.	18.	21.	23.	23.	20.	17.	16.	16.
90.0<<	13.	13.	14.	18.	21.	23.	23.	20.	17.	16.	16.
87.5	13.	13.	14.	18.	21.	23.	23.	20.	17.	16.	16.
85.0	13.	13.	14.	18.	21.	23.	23.	20.	17.	16.	16.
82.5	13.	13.	14.	18.	21.	23.	23.	20.	17.	16.	16.
80.0	13.	13.	14.	17.	21.	22.	22.	20.	17.	16.	16.
77.5	13.	12.	14.	17.	21.	22.	22.	20.	17.	16.	15.
75.0	12.	12.	13.	17.	20.	22.	22.	20.	17.	16.	15.
72.5	12.	12.	13.	17.	20.	22.	22.	19.	16.	15.	15.
70.0	12.	12.	13.	17.	20.	21.	21.	19.	16.	15.	15.
V 67.5	12.	12.	13.	16.	20.	21.	21.	19.	16.	15.	14.
E 65.0	11.	11.	13.	16.	19.	21.	21.	18.	15.	14.	14.
R 62.5	11.	11.	12.	16.	19.	20.	20.	18.	15.	14.	14.
T 60.0	11.	11.	12.	15.	18.	20.	20.	17.	15.	14.	13.
I 57.5	10.	10.	11.	15.	18.	19.	19.	17.	14.	13.	13.
C 55.0	10.	10.	11.	14.	17.	19.	19.	16.	13.	13.	12.
A 52.5	10.	9.	11.	14.	17.	18.	18.	16.	13.	12.	12.
L 50.0	9.	9.	10.	13.	16.	17.	17.	15.	12.	11.	11.
47.5	9.	9.	10.	12.	15.	16.	16.	14.	12.	11.	11.
A 45.0	8.	8.	9.	12.	15.	16.	16.	14.	11.	10.	10.
N 42.5	8.	8.	8.	11.	14.	15.	15.	13.	10.	10.	9.
G 40.0	7.	7.	8.	11.	13.	14.	14.	12.	10.	9.	9.
L 37.5	7.	7.	7.	10.	12.	13.	13.	11.	9.	8.	8.
E 35.0	6.	6.	7.	9.	11.	12.	12.	10.	8.	8.	8.
32.5	6.	6.	6.	8.	10.	11.	11.	10.	8.	7.	7.
30.0	5.	5.	6.	8.	10.	10.	10.	9.	7.	6.	6.
27.5	5.	4.	5.	7.	9.	9.	9.	8.	6.	6.	6.
25.0	4.	4.	4.	6.	8.	8.	8.	7.	6.	5.	5.
20.0	3.	3.	3.	5.	6.	6.	6.	5.	4.	4.	4.
15.0	2.	2.	2.	3.	4.	4.	4.	4.	3.	3.	3.
10.0	1.	1.	1.	2.	2.	2.	3.	2.	2.	1.	1.
5.0	1.	0.	0.	1.	1.	1.	1.	1.	1.	1.	1.
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.
175.0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
165.0	3.	3.	4.	5.	5.	4.	3.	2.	2.	3.
155.0	5.	6.	7.	8.	9.	8.	6.	5.	4.	4.
145.0	8.	8.	10.	12.	12.	11.	9.	7.	6.	6.
135.0	10.	11.	14.	16.	16.	15.	12.	9.	8.	8.
125.0	13.	13.	16.	18.	18.	17.	14.	11.	10.	10.
115.0	14.	15.	18.	21.	21.	19.	16.	12.	11.	11.
105.0	16.	17.	19.	22.	22.	20.	17.	14.	12.	12.
95.0	16.	17.	20.	23.	23.	21.	18.	14.	13.	13.
90.0<<	16.	17.	20.	23.	23.	21.	18.	14.	13.	13.
87.5	16.	17.	20.	23.	23.	21.	18.	14.	13.	13.
85.0	16.	17.	20.	23.	23.	21.	18.	14.	13.	13.
82.5	16.	17.	20.	23.	23.	21.	18.	14.	13.	13.
80.0	16.	17.	20.	22.	22.	21.	17.	14.	13.	13.
77.5	16.	17.	20.	22.	22.	21.	17.	14.	12.	13.
75.0	16.	17.	20.	22.	22.	20.	17.	13.	12.	12.
72.5	15.	16.	19.	22.	22.	20.	17.	13.	12.	12.
70.0	15.	16.	19.	21.	21.	20.	17.	13.	12.	12.
V 67.5	15.	16.	19.	21.	21.	20.	16.	13.	12.	12.
E 65.0	14.	15.	18.	21.	21.	19.	16.	13.	11.	11.
R 62.5	14.	15.	18.	20.	20.	19.	16.	12.	11.	11.
T 60.0	14.	15.	17.	20.	20.	18.	15.	12.	11.	11.
I 57.5	13.	14.	17.	19.	19.	18.	15.	11.	10.	10.
C 55.0	13.	13.	16.	19.	19.	17.	14.	11.	10.	10.
A 52.5	12.	13.	16.	18.	18.	17.	14.	11.	9.	10.
L 50.0	11.	12.	15.	17.	17.	16.	13.	10.	9.	9.
47.5	11.	12.	14.	16.	16.	15.	12.	10.	9.	9.
A 45.0	10.	11.	14.	16.	16.	15.	12.	9.	8.	8.
N 42.5	10.	10.	13.	15.	15.	14.	11.	8.	8.	8.
G 40.0	9.	10.	12.	14.	14.	13.	11.	8.	7.	7.
L 37.5	8.	9.	11.	13.	13.	12.	10.	7.	7.	7.
E 35.0	8.	8.	10.	12.	12.	11.	9.	7.	6.	6.
32.5	7.	8.	10.	11.	11.	10.	8.	6.	6.	6.
30.0	6.	7.	9.	10.	10.	10.	8.	6.	5.	5.
27.5	6.	6.	8.	9.	9.	9.	7.	5.	4.	5.
25.0	5.	6.	7.	8.	8.	8.	6.	4.	4.	4.
20.0	4.	4.	5.	6.	6.	6.	5.	3.	3.	3.
15.0	3.	3.	4.	4.	4.	4.	3.	2.	2.	2.
10.0	1.	2.	2.	3.	2.	2.	2.	1.	1.	1.
5.0	1.	1.	1.	1.	1.	1.	1.	0.	0.	1.
0.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

CONE OF MAXIMUM CANDELA