

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: LUMARK

Report Number: P195645

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7050-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195645  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-SL3-7050-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16868 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G3

Input Watts (W): 191  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

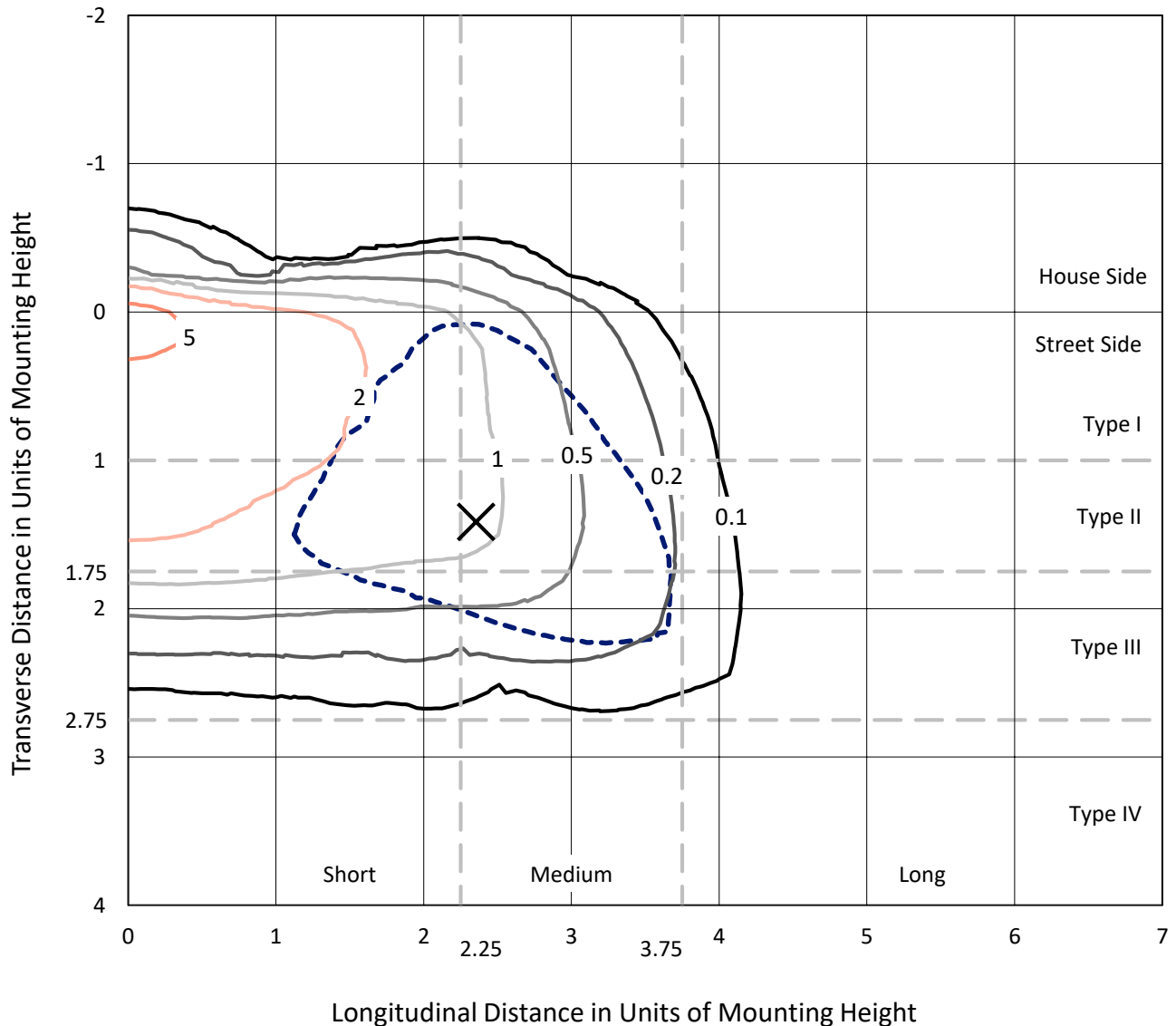


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

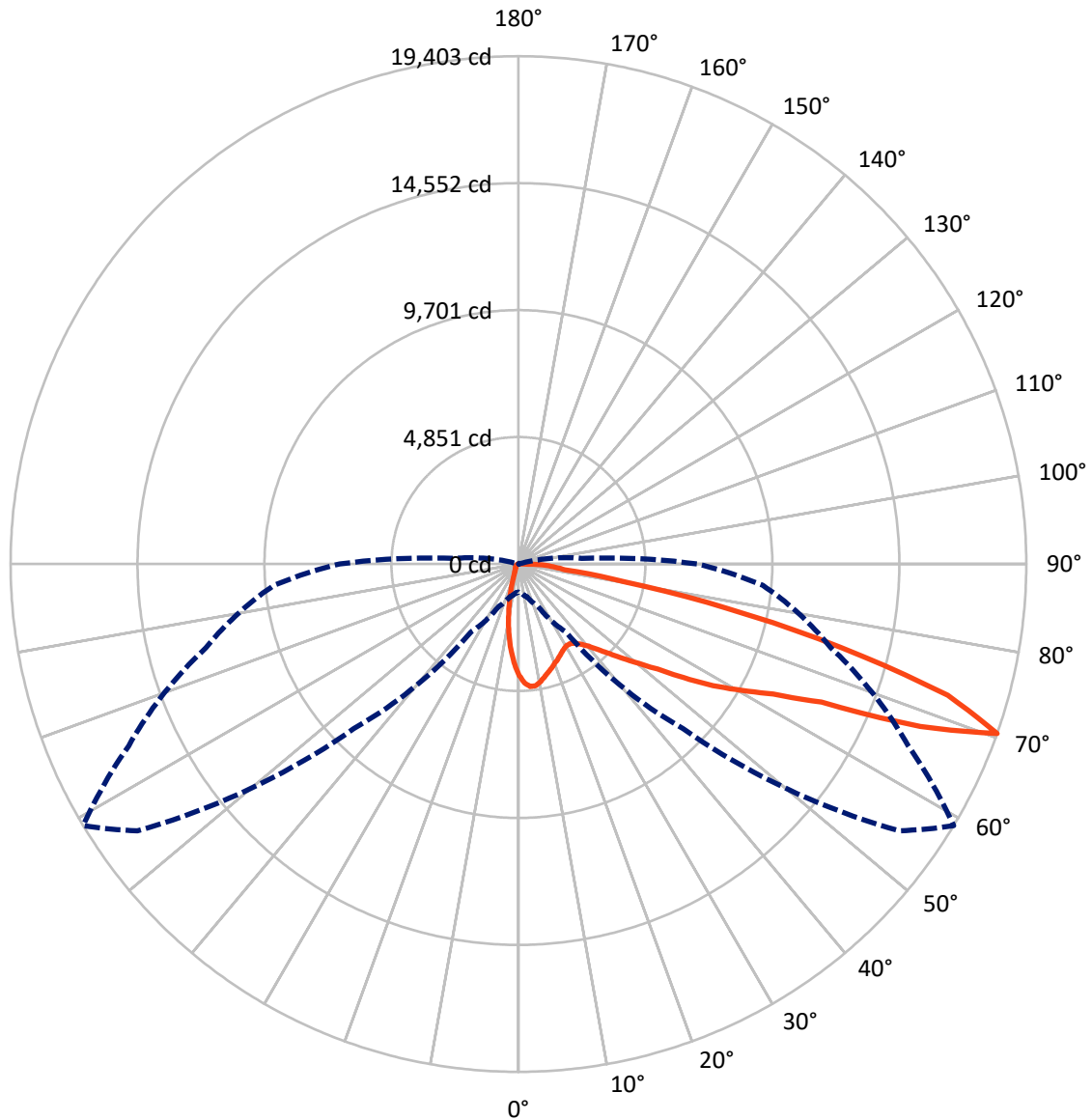


Based on 25 foot mounting height. Maximum calculated value = 7.3 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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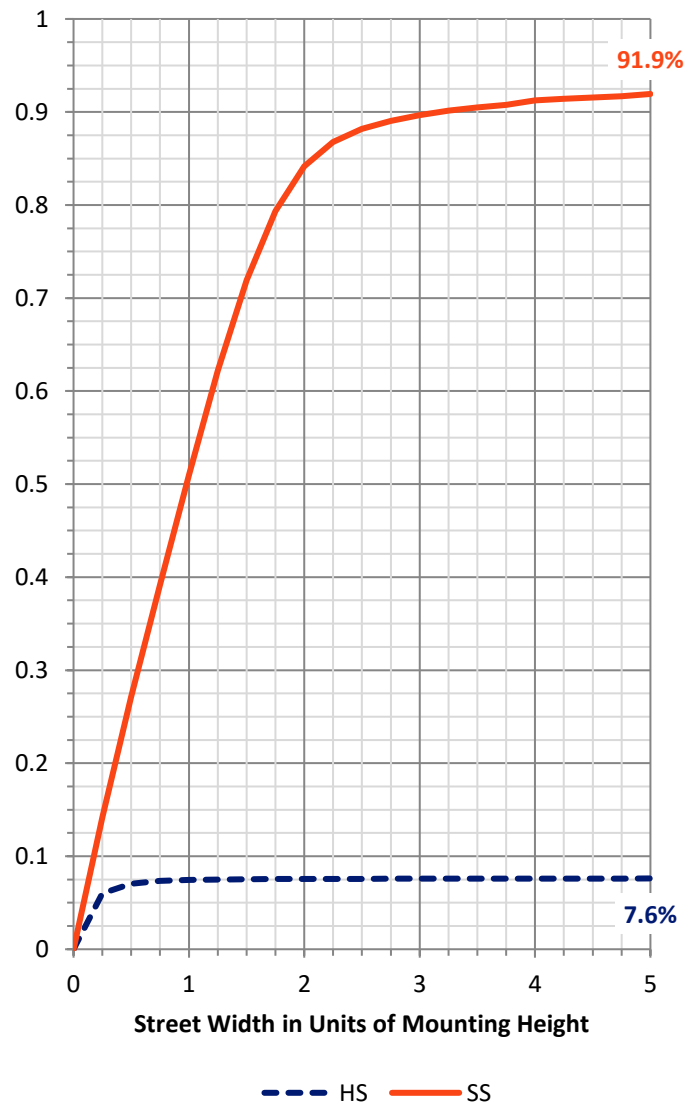
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1296.7	0.0	1296.7
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	15571.3	0.0	15571.3
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	16868.0	0.0	16868.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	350.7	2.1
10°-20°	735.6	4.4
20°-30°	995.8	5.9
30°-40°	1437.1	8.5
40°-50°	2386.8	14.1
50°-60°	3650.8	21.6
60°-70°	4540.7	26.9
70°-80°	2510.1	14.9
80°-90°	260.3	1.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	16868.0	100.0
0°-180°	16868.0	100.0

**Coefficient of Utilization**



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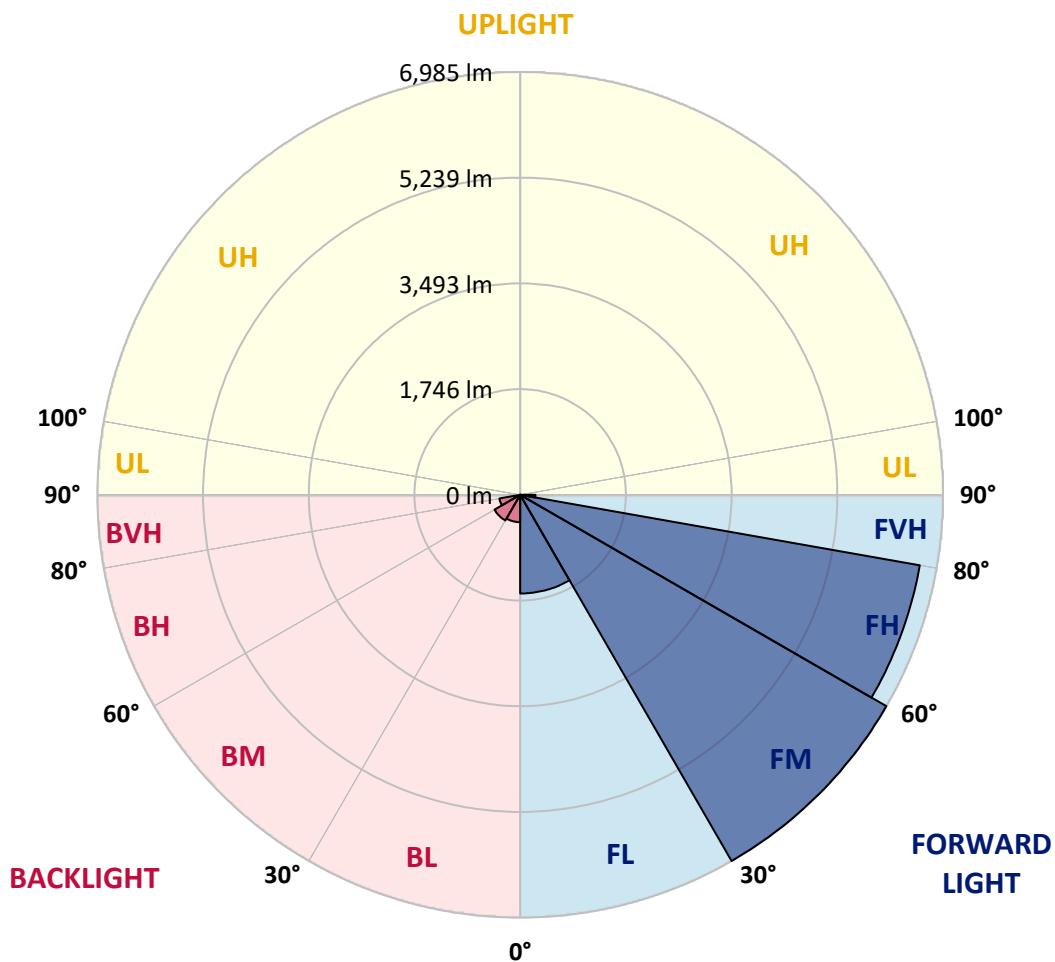
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1630.3	9.7			
FM	(30°-60°)	6985.2	41.4			
FH	(60°-80°)	6703.0	39.7			G3/7500
FVH	(80°-90°)	252.8	1.5			G3/500
BL	(0°-30°)	451.9	2.7	B1/500		
BM	(30°-60°)	489.5	2.9	B1/1000		
BH	(60°-80°)	347.8	2.1	B1/500		G1/500
BVH	(80°-90°)	7.5	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3
2.5°	4821.4	4813.7	4781.9	4775.6	4739.9	4668.7	4586.0	4552.9	4485.4	4378.6	4260.2
5°	4901.5	4905.4	4907.9	4893.9	4888.8	4830.3	4738.7	4699.2	4608.9	4433.3	4217.0
7.5°	4601.2	4611.4	4643.2	4657.2	4718.3	4741.2	4722.1	4696.7	4625.4	4418.0	4113.9
10°	4284.4	4303.5	4337.8	4360.7	4435.8	4496.9	4574.5	4580.9	4565.6	4367.1	3998.1
12.5°	4012.1	4029.9	4068.1	4113.9	4190.2	4269.1	4384.9	4425.6	4476.5	4334.0	3915.4
15°	3778.0	3783.0	3819.9	3877.2	3977.7	4085.9	4223.3	4283.1	4382.4	4321.3	3851.8
17.5°	3573.1	3574.4	3598.5	3650.7	3772.9	3915.4	4075.7	4154.6	4280.6	4303.5	3795.8
20°	3438.2	3436.9	3438.2	3466.2	3574.4	3743.6	3938.3	4021.0	4182.6	4281.9	3738.5
22.5°	3392.4	3386.0	3356.8	3346.6	3415.3	3564.2	3797.0	3905.2	4094.8	4275.5	3696.5
25°	3448.4	3444.6	3382.2	3323.7	3330.0	3422.9	3653.3	3785.6	4026.1	4298.4	3686.3
27.5°	3629.1	3621.4	3526.0	3411.5	3339.0	3355.5	3546.4	3685.1	3971.4	4354.4	3700.3
30°	3865.8	3867.0	3765.2	3626.5	3456.0	3361.9	3489.1	3620.2	3934.5	4438.4	3730.9
32.5°	4129.2	4127.9	4055.4	3895.0	3677.4	3478.9	3514.6	3625.3	3939.6	4561.8	3789.4
35°	4401.5	4387.5	4363.3	4222.0	3967.6	3683.8	3630.3	3711.8	3993.0	4724.7	3888.7
37.5°	4715.8	4710.7	4734.9	4586.0	4326.4	3985.4	3833.9	3888.7	4127.9	4965.2	4049.0
40°	5215.8	5187.8	5199.3	4997.0	4731.0	4391.3	4119.0	4133.0	4342.9	5283.3	4302.2
42.5°	6168.9	6055.7	5843.2	5464.0	5176.4	4841.7	4491.8	4467.6	4647.1	5668.8	4635.6
45°	7307.8	7178.0	6642.3	5979.3	5621.8	5325.3	4952.4	4887.5	5021.2	6128.2	5065.7
47.5°	8258.3	8118.3	7408.3	6517.6	6074.8	5824.1	5462.7	5386.4	5469.1	6661.4	5582.3
50°	8582.8	8505.2	7881.7	6965.5	6531.6	6384.0	6102.8	5975.5	5995.9	7236.5	6185.5
52.5°	8433.9	8407.2	7989.8	7272.2	6954.0	7002.4	6803.9	6670.3	6647.4	7865.1	6852.2
55°	8119.6	8106.9	7903.3	7442.7	7326.9	7568.6	7787.5	7671.7	7455.4	8533.2	7403.2
57.5°	7670.4	7718.8	7865.1	7771.0	7785.0	8166.7	8701.1	8760.9	8437.7	9065.1	7811.7
60°	6470.5	6600.3	7270.9	8123.4	8776.2	9161.8	9679.7	9791.6	9269.9	9429.0	8283.8
62.5°	4783.2	4969.0	5924.6	7491.0	9322.1	11053.9	10981.4	10931.8	10063.9	9916.3	9142.7
65°	2809.6	3027.2	3835.2	5853.3	8498.8	12270.4	13411.8	12724.7	11274.1	10929.2	10510.6
67.5°	1399.7	1401.0	1766.2	3089.6	6280.9	11421.7	16959.4	16562.4	13847.0	12421.8	11050.1
70°	1076.5	1105.8	1306.8	1795.5	3176.1	8895.8	17772.6	19402.6	16432.6	12355.7	9375.5
72.5°	912.4	931.4	1163.0	1562.6	2374.4	4883.7	15385.4	17150.3	15680.6	10439.3	6910.8
75°	656.6	671.9	1029.4	1417.5	2186.1	2422.8	10553.8	12719.6	11765.2	7343.4	3803.4
77.5°	162.9	161.6	358.8	1150.3	1955.8	2018.1	6055.7	8156.5	6750.4	3006.8	977.3
80°	72.5	70.0	81.4	241.8	1819.6	1904.9	2663.3	4119.0	2589.5	487.4	299.0
82.5°	50.9	48.4	50.9	89.1	608.2	1767.5	1609.7	1785.3	948.0	166.7	127.2
85°	16.5	15.3	28.0	75.1	170.5	1019.2	1570.2	1333.5	704.9	71.3	85.3
87.5°	2.5	2.5	10.2	40.7	49.6	339.7	921.3	923.8	316.8	42.0	38.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3	4265.3
2.5°	4200.4	4125.3	4019.7	3914.1	3818.7	3720.7	3641.8	3604.9	3588.4	3565.5	3515.8
5°	4103.7	3967.6	3736.0	3508.2	3295.7	3092.1	2917.8	2818.5	2711.6	2706.5	2654.4
7.5°	3948.5	3755.1	3389.9	3036.1	2711.6	2401.1	2133.9	1960.9	1842.5	1768.7	1717.8
10°	3775.4	3527.3	3043.7	2546.2	2104.7	1689.8	1346.3	1122.3	986.2	917.4	878.0
12.5°	3638.0	3326.2	2702.7	2076.7	1523.1	1047.2	727.9	565.0	492.4	464.5	451.7
15°	3519.6	3141.7	2383.3	1656.8	1016.7	601.9	421.2	367.7	356.3	356.3	355.0
17.5°	3400.0	2963.6	2072.8	1244.5	640.1	394.5	332.1	324.5	325.8	329.6	329.6
20°	3286.8	2794.3	1773.8	886.9	419.9	315.6	301.6	299.0	302.8	307.9	306.7
22.5°	3195.2	2645.5	1493.9	609.5	323.2	286.3	277.4	273.6	276.1	279.9	278.7
25°	3130.3	2518.2	1236.8	425.0	281.2	260.9	250.7	245.6	243.0	245.6	244.3
27.5°	3090.8	2411.3	995.1	319.4	251.9	235.4	222.7	212.5	206.1	206.1	203.6
30°	3065.4	2310.8	780.0	264.7	227.8	210.0	192.1	178.1	168.0	165.4	164.1
32.5°	3064.1	2224.3	582.8	234.1	204.9	184.5	162.9	145.1	133.6	131.1	129.8
35°	3095.9	2154.3	428.8	211.2	184.5	160.3	136.2	117.1	106.9	106.9	105.6
37.5°	3178.6	2113.6	324.5	193.4	168.0	140.0	114.5	96.7	87.8	90.3	90.3
40°	3332.6	2105.9	264.7	179.4	154.0	122.2	92.9	78.9	75.1	78.9	78.9
42.5°	3568.0	2146.7	235.4	169.2	141.2	104.3	77.6	67.4	66.2	70.0	70.0
45°	3874.7	2226.8	218.9	160.3	127.2	86.5	64.9	58.5	57.3	62.4	62.4
47.5°	4246.2	2335.0	203.6	150.2	113.2	71.3	54.7	49.6	49.6	54.7	56.0
50°	4686.5	2481.3	188.3	140.0	101.8	59.8	45.8	42.0	43.3	48.4	49.6
52.5°	5192.9	2660.7	174.3	131.1	89.1	48.4	38.2	35.6	36.9	42.0	43.3
55°	5629.4	2817.2	157.8	122.2	72.5	39.4	31.8	30.5	31.8	38.2	38.2
57.5°	6009.9	2967.4	142.5	108.2	57.3	31.8	25.4	25.4	28.0	34.4	35.6
60°	6515.0	3204.1	129.8	91.6	43.3	24.2	20.4	21.6	25.4	30.5	31.8
62.5°	7409.6	3606.2	113.2	76.3	31.8	19.1	16.5	17.8	22.9	29.3	30.5
65°	8529.3	3986.6	94.2	63.6	24.2	14.0	12.7	16.5	22.9	29.3	30.5
67.5°	8414.8	3467.5	73.8	50.9	17.8	11.5	10.2	15.3	21.6	29.3	30.5
70°	6824.2	2430.4	54.7	34.4	14.0	10.2	10.2	15.3	21.6	28.0	29.3
72.5°	4733.6	1352.6	42.0	22.9	12.7	10.2	8.9	14.0	20.4	28.0	29.3
75°	2252.3	414.8	33.1	16.5	11.5	8.9	7.6	14.0	20.4	28.0	29.3
77.5°	432.6	105.6	26.7	14.0	10.2	8.9	7.6	12.7	20.4	26.7	28.0
80°	146.3	47.1	21.6	12.7	10.2	8.9	7.6	12.7	19.1	25.4	26.7
82.5°	80.2	26.7	19.1	11.5	10.2	7.6	6.4	11.5	17.8	25.4	26.7
85°	62.4	19.1	15.3	11.5	10.2	7.6	6.4	11.5	17.8	24.2	25.4
87.5°	31.8	14.0	12.7	11.5	10.2	7.6	6.4	10.2	16.5	22.9	25.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)