

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: P270597

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7027-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270597  
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-05-D-UNV-SL3-7027-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 800mA 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: 17916.9 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G3

Input Watts (W): 210  
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

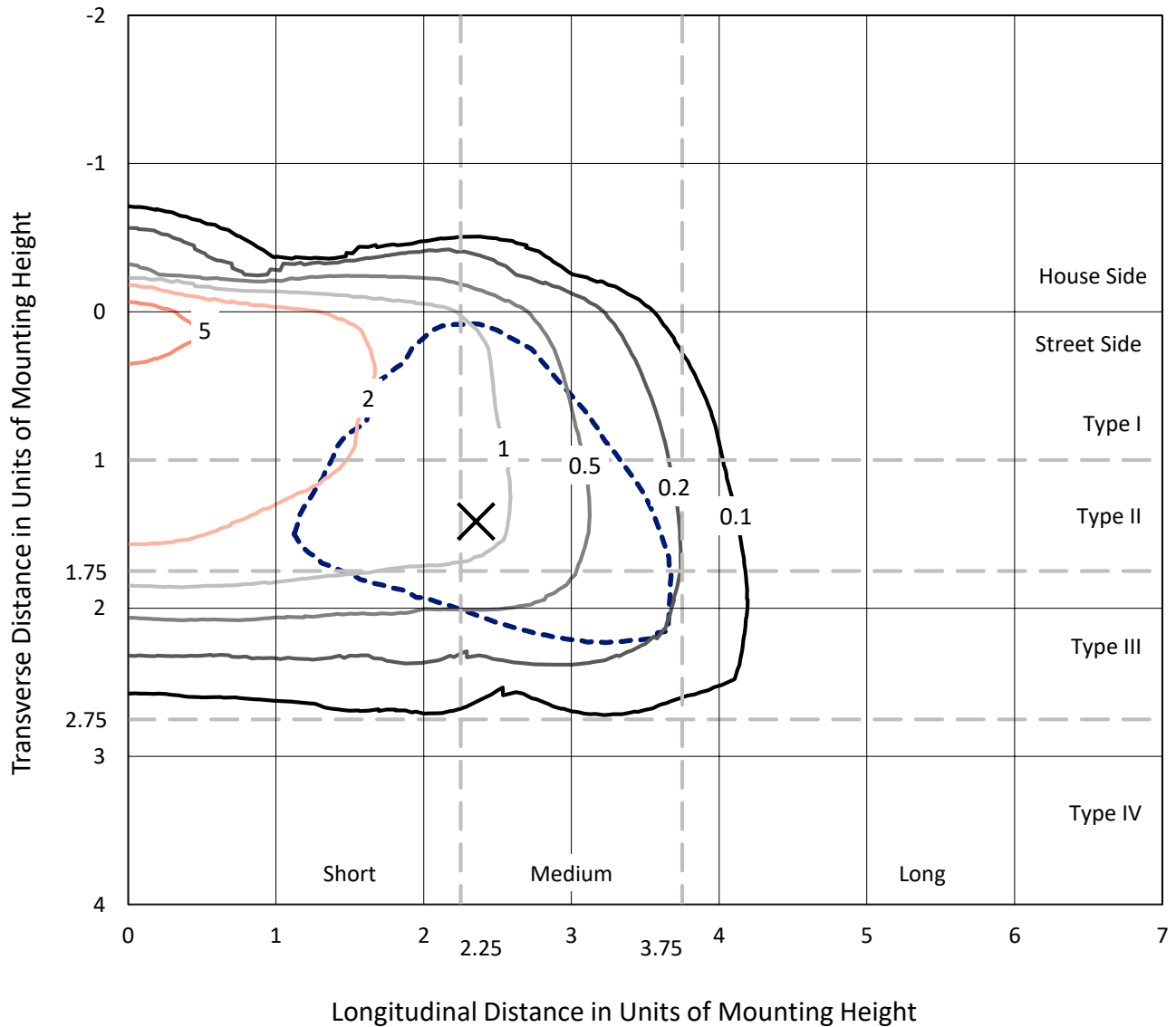


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

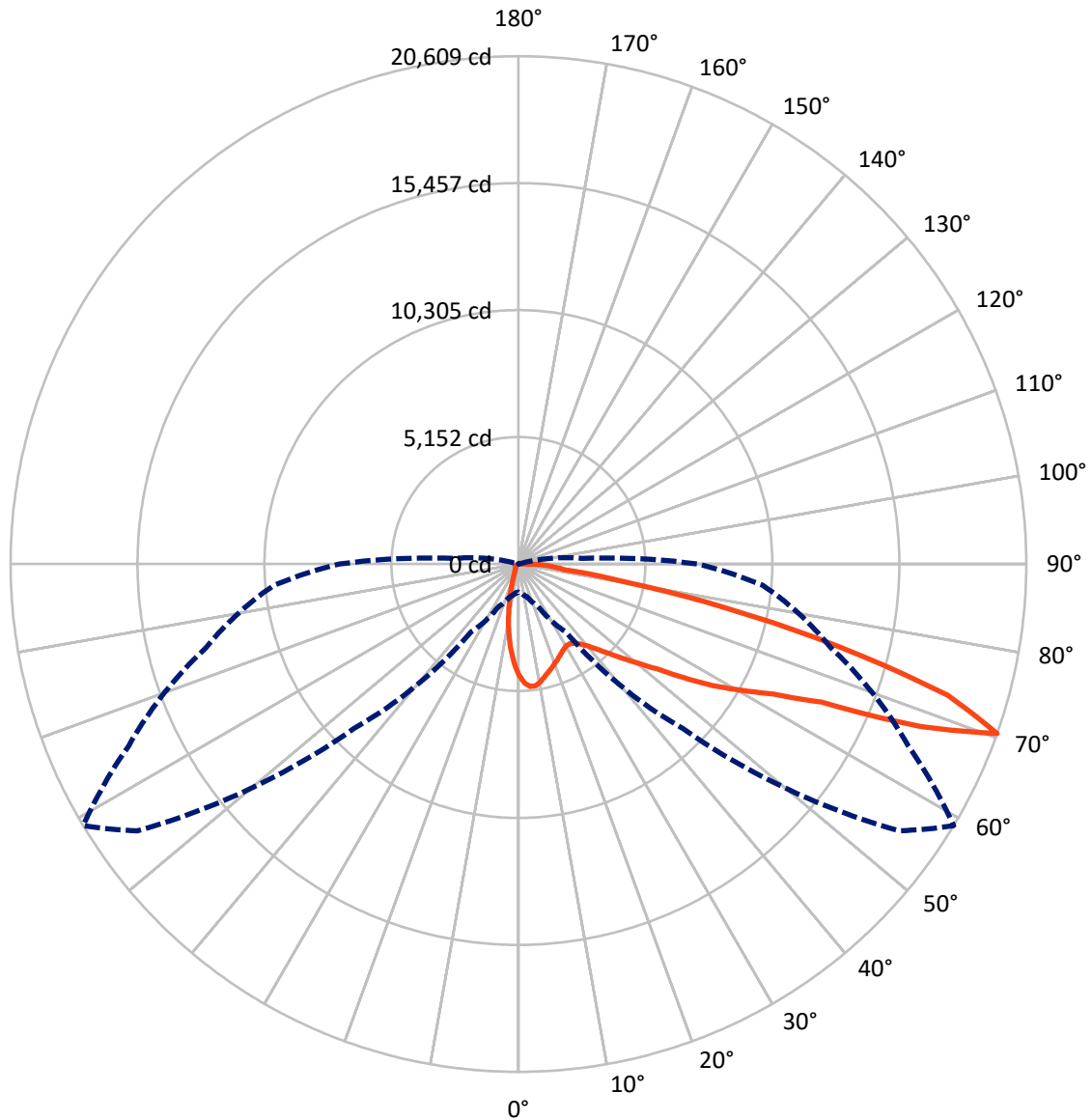


Based on 25 foot mounting height. Maximum calculated value = 7.7 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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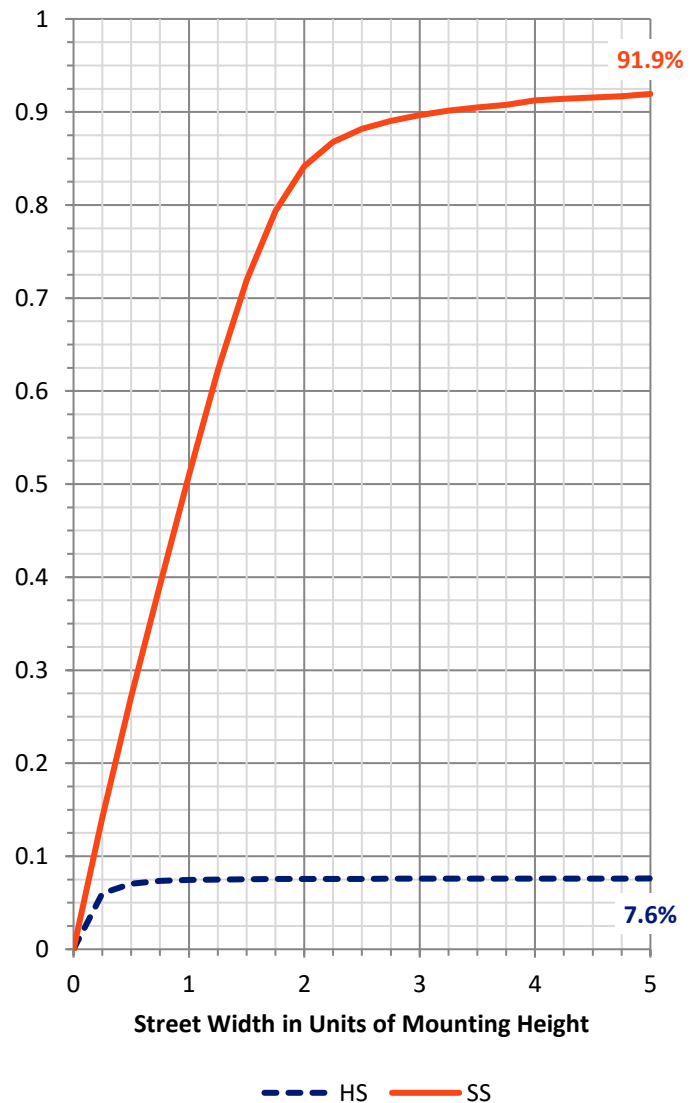
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1377.3	0.0	1377.3
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	16539.6	0.0	16539.6
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	17916.9	0.0	17916.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	372.5	2.1
10°-20°	781.4	4.4
20°-30°	1057.8	5.9
30°-40°	1526.5	8.5
40°-50°	2535.2	14.1
50°-60°	3877.8	21.6
60°-70°	4823.1	26.9
70°-80°	2666.2	14.9
80°-90°	276.4	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°	17916.9	100.0
0°-180°	17916.9	100.0

**Coefficient of Utilization**



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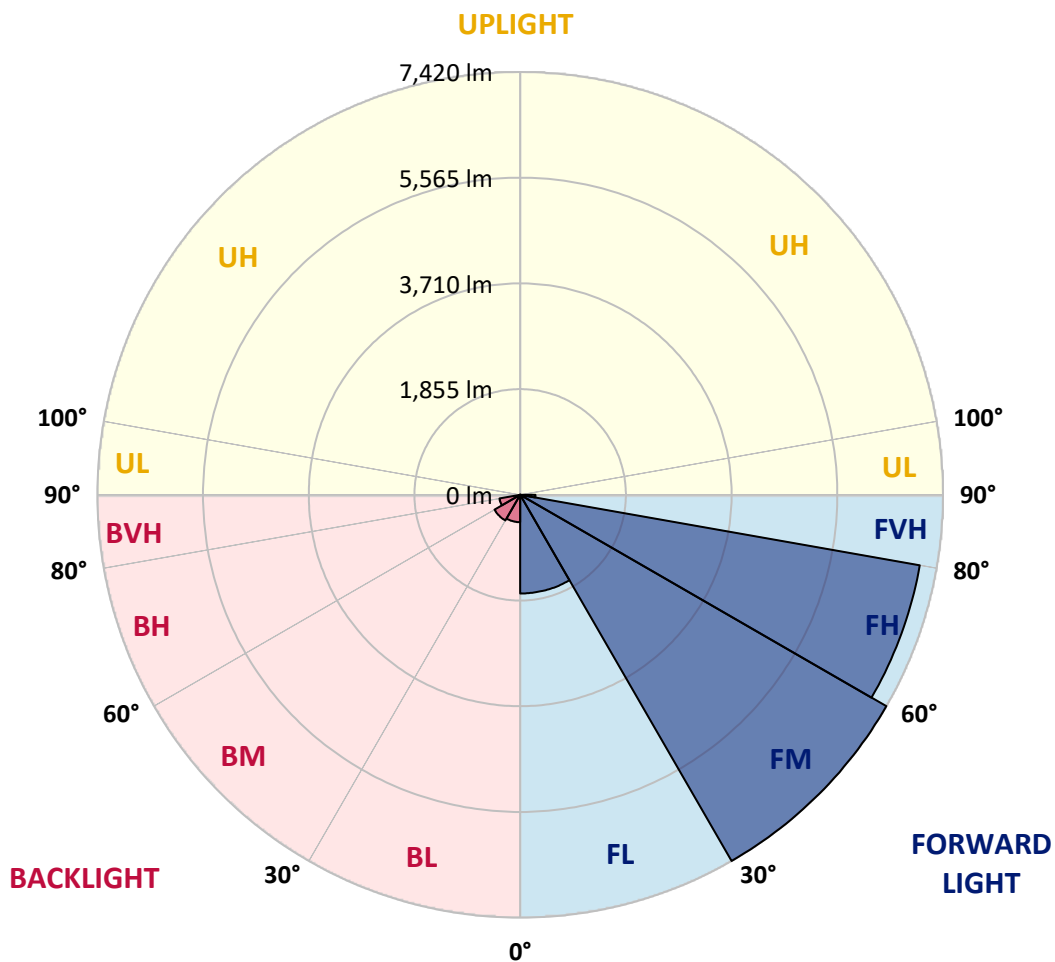
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1731.7	9.7			
FM	(30°-60°)	7419.6	41.4			
FH	(60°-80°)	7119.8	39.7			G3/7500
FVH	(80°-90°)	268.5	1.5			G3/500
BL	(0°-30°)	480.0	2.7	B1/500		
BM	(30°-60°)	519.9	2.9	B1/1000		
BH	(60°-80°)	369.5	2.1	B1/500		G1/500
BVH	(80°-90°)	8.0	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°	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5
2.5°	5121.1	5113.2	5079.2	5072.5	5034.7	4959.1	4871.1	4836.0	4764.4	4650.9	4525.1
5°	5206.3	5210.3	5213.1	5198.2	5192.8	5130.7	5033.4	4991.4	4895.5	4708.9	4479.2
7.5°	4887.4	4898.2	4932.0	4946.8	5011.7	5036.1	5015.7	4988.7	4913.1	4692.7	4369.7
10°	4550.9	4571.0	4607.5	4631.9	4711.7	4776.6	4859.0	4865.8	4849.5	4638.7	4246.6
12.5°	4261.6	4280.6	4321.0	4369.7	4450.8	4534.6	4657.6	4700.8	4754.9	4603.5	4158.9
15°	4012.9	4018.3	4057.5	4118.3	4225.1	4340.0	4486.0	4549.5	4654.8	4590.0	4091.3
17.5°	3795.2	3796.6	3822.3	3877.8	4007.5	4158.9	4329.1	4413.0	4546.9	4571.0	4031.9
20°	3652.0	3650.6	3652.0	3681.8	3796.6	3976.3	4183.1	4271.0	4442.7	4548.1	3971.0
22.5°	3603.3	3596.6	3565.6	3554.8	3627.6	3785.8	4033.2	4148.1	4349.5	4541.3	3926.4
25°	3662.7	3658.7	3592.5	3530.3	3537.2	3635.8	3880.4	4021.1	4276.4	4565.6	3915.6
27.5°	3854.7	3846.6	3745.3	3623.7	3546.6	3564.1	3767.0	3914.3	4218.4	4625.2	3930.4
30°	4106.2	4107.5	3999.3	3852.0	3671.0	3570.9	3706.0	3845.3	4179.2	4714.3	3963.0
32.5°	4386.0	4384.5	4307.6	4137.2	3906.1	3695.3	3733.0	3850.8	4184.6	4845.5	4025.0
35°	4675.1	4660.2	4634.6	4484.6	4214.3	3912.8	3856.2	3942.7	4241.3	5018.6	4130.4
37.5°	5008.9	5003.6	5029.3	4871.1	4595.4	4233.3	4072.3	4130.4	4384.5	5273.9	4300.7
40°	5540.1	5510.5	5522.6	5307.7	5025.3	4664.4	4375.1	4389.9	4612.9	5611.8	4569.8
42.5°	6552.5	6432.3	6206.5	5803.8	5498.3	5142.8	4771.2	4745.4	4936.0	6021.3	4923.9
45°	7762.3	7624.4	7055.4	6351.1	5971.4	5656.4	5260.5	5191.5	5333.3	6509.3	5380.7
47.5°	8771.9	8623.2	7869.1	6922.9	6452.5	6186.3	5802.4	5721.3	5809.2	7075.6	5929.4
50°	9116.4	9034.1	8371.8	7398.6	6937.7	6780.9	6482.3	6347.2	6368.8	7686.5	6570.2
52.5°	8958.3	8930.1	8486.6	7724.3	7386.5	7437.8	7227.0	7085.0	7060.8	8354.1	7278.3
55°	8624.5	8611.1	8394.8	7905.4	7782.5	8039.3	8271.8	8148.7	7919.0	9063.8	7863.7
57.5°	8147.4	8198.8	8354.1	8254.2	8269.1	8674.6	9242.2	9305.7	8962.4	9628.8	8297.5
60°	6872.8	7010.7	7723.0	8628.6	9321.9	9731.5	10281.6	10400.5	9846.4	10015.4	8798.9
62.5°	5080.6	5278.0	6293.0	7956.8	9901.7	11741.3	11664.3	11611.5	10689.8	10532.9	9711.1
65°	2984.3	3215.5	4073.8	6217.3	9027.2	13033.5	14245.9	13516.0	11975.1	11608.8	11164.1
67.5°	1486.8	1488.1	1876.0	3281.7	6671.5	12131.9	18014.2	17592.3	14708.0	13194.2	11737.3
70°	1143.5	1174.5	1388.2	1907.1	3373.6	9449.0	18877.7	20609.2	17454.4	13124.0	9958.6
72.5°	969.1	989.4	1235.3	1659.8	2522.1	5187.4	16342.1	18216.8	16655.7	11088.5	7340.5
75°	697.4	713.7	1093.4	1505.6	2322.1	2573.5	11210.2	13510.6	12496.9	7800.1	4039.9
77.5°	173.1	171.7	381.2	1221.9	2077.4	2143.6	6432.3	8663.8	7170.2	3193.8	1038.0
80°	77.1	74.3	86.4	256.7	1932.9	2023.3	2828.9	4375.1	2750.5	517.7	317.6
82.5°	54.1	51.4	54.1	94.6	646.2	1877.4	1709.7	1896.3	1006.9	177.1	135.1
85°	17.5	16.2	29.7	79.7	181.1	1082.6	1667.9	1416.4	748.7	75.6	90.5
87.5°	2.8	2.8	10.8	43.3	52.7	360.8	978.6	981.3	336.5	44.6	40.6
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°	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5	4530.5
2.5°	4461.6	4381.9	4269.7	4157.5	4056.1	3952.1	3868.3	3829.0	3811.5	3787.2	3734.4
5°	4358.8	4214.3	3968.4	3726.3	3500.7	3284.4	3099.2	2993.8	2880.2	2874.8	2819.4
7.5°	4193.9	3988.6	3600.6	3224.9	2880.2	2550.5	2266.7	2082.8	1957.0	1878.7	1824.6
10°	4010.2	3746.7	3233.0	2704.5	2235.5	1795.0	1430.0	1192.1	1047.6	974.5	932.6
12.5°	3864.1	3533.0	2870.9	2205.8	1617.8	1112.5	773.1	600.1	523.1	493.3	479.9
15°	3738.6	3337.2	2531.6	1759.8	1079.9	639.4	447.4	390.7	378.5	378.5	377.1
17.5°	3611.5	3147.9	2201.7	1321.9	679.8	419.0	352.8	344.7	345.9	350.1	350.1
20°	3491.2	2968.1	1884.1	942.1	446.0	335.2	320.3	317.6	321.7	327.2	325.7
22.5°	3393.8	2810.0	1586.8	647.4	343.3	304.0	294.6	290.6	293.2	297.3	296.0
25°	3324.9	2674.9	1313.7	451.5	298.6	277.0	266.3	260.9	258.2	260.9	259.5
27.5°	3283.0	2561.2	1056.9	339.3	267.6	250.1	236.6	225.7	218.9	218.9	216.2
30°	3255.9	2454.4	828.5	281.1	242.0	223.0	204.1	189.3	178.5	175.7	174.4
32.5°	3254.6	2362.6	619.0	248.7	217.6	196.0	173.1	154.1	141.9	139.1	137.9
35°	3288.4	2288.3	455.5	224.3	196.0	170.3	144.5	124.3	113.5	113.5	112.2
37.5°	3376.3	2245.0	344.7	205.4	178.5	148.7	121.6	102.8	93.2	95.9	95.9
40°	3539.9	2236.9	281.1	190.6	163.5	129.7	98.6	83.8	79.7	83.8	83.8
42.5°	3789.9	2280.2	250.1	179.8	150.0	110.9	82.5	71.7	70.2	74.3	74.3
45°	4115.7	2365.2	232.5	170.3	135.1	91.8	68.9	62.2	60.8	66.3	66.3
47.5°	4510.3	2480.2	216.2	159.4	120.4	75.6	58.1	52.7	52.7	58.1	59.5
50°	4978.0	2635.5	200.1	148.7	108.2	63.5	48.7	44.6	46.0	51.4	52.7
52.5°	5515.9	2826.2	185.2	139.1	94.6	51.4	40.6	37.9	39.2	44.6	46.0
55°	5979.5	2992.4	167.7	129.7	77.1	42.0	33.7	32.5	33.7	40.6	40.6
57.5°	6383.5	3152.0	151.4	115.0	60.8	33.7	26.9	26.9	29.7	36.6	37.9
60°	6920.2	3403.3	137.9	97.3	46.0	25.7	21.6	22.9	26.9	32.5	33.7
62.5°	7870.3	3830.5	120.4	81.0	33.7	20.3	17.5	19.0	24.3	31.1	32.5
65°	9059.8	4234.5	100.0	67.6	25.7	14.8	13.6	17.5	24.3	31.1	32.5
67.5°	8938.0	3683.1	78.4	54.1	19.0	12.1	10.8	16.2	22.9	31.1	32.5
70°	7248.7	2581.5	58.1	36.6	14.8	10.8	10.8	16.2	22.9	29.7	31.1
72.5°	5028.0	1436.7	44.6	24.3	13.6	10.8	9.4	14.8	21.6	29.7	31.1
75°	2392.4	440.6	35.2	17.5	12.1	9.4	8.2	14.8	21.6	29.7	31.1
77.5°	459.6	112.2	28.3	14.8	10.8	9.4	8.2	13.6	21.6	28.3	29.7
80°	155.4	50.0	22.9	13.6	10.8	9.4	8.2	13.6	20.3	26.9	28.3
82.5°	85.2	28.3	20.3	12.1	10.8	8.2	6.7	12.1	19.0	26.9	28.3
85°	66.3	20.3	16.2	12.1	10.8	8.2	6.7	12.1	19.0	25.7	26.9
87.5°	33.7	14.8	13.6	12.1	10.8	8.2	6.7	10.8	17.5	24.3	26.9
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)