

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: P196619

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196619
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23466.7 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

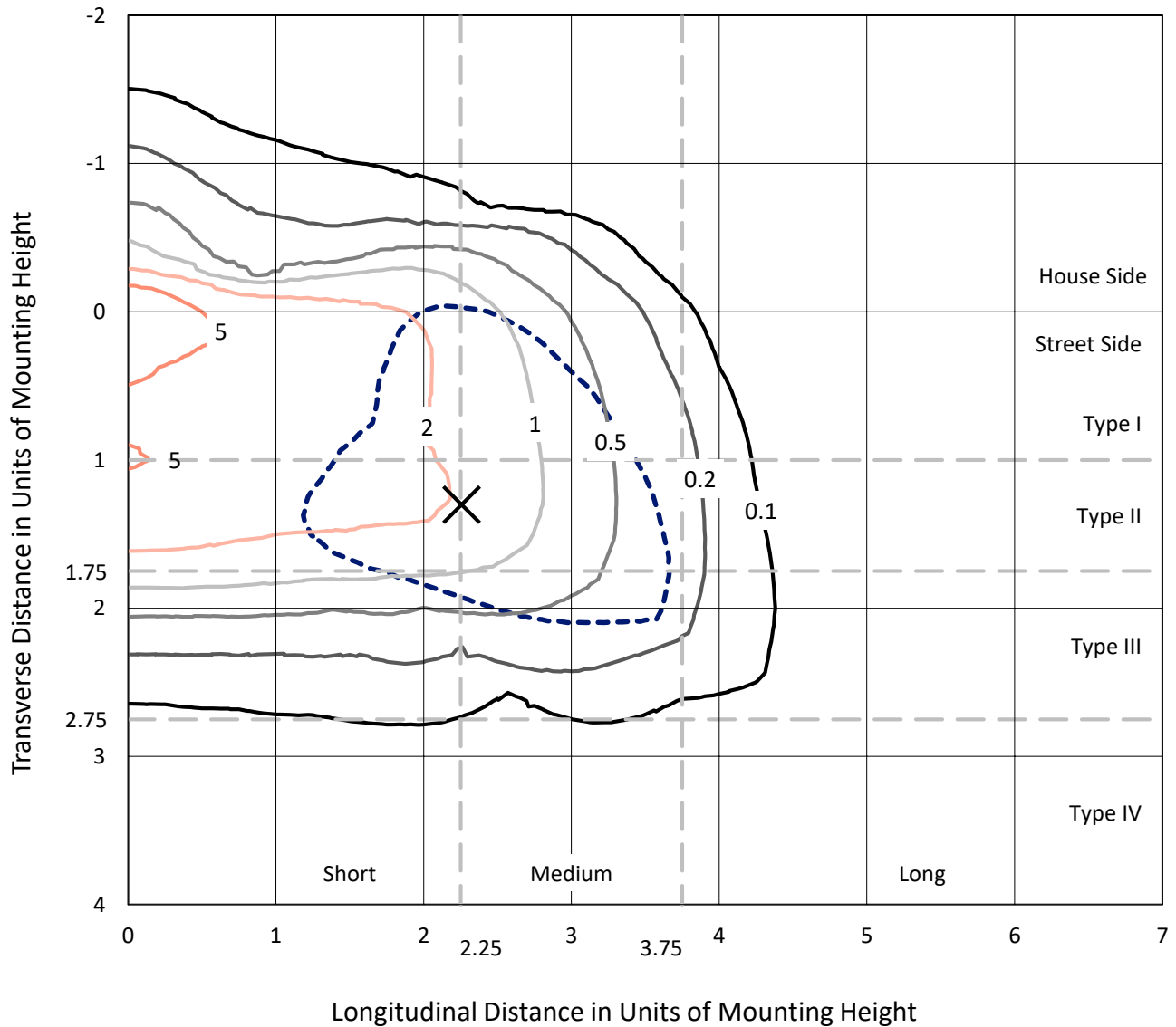
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

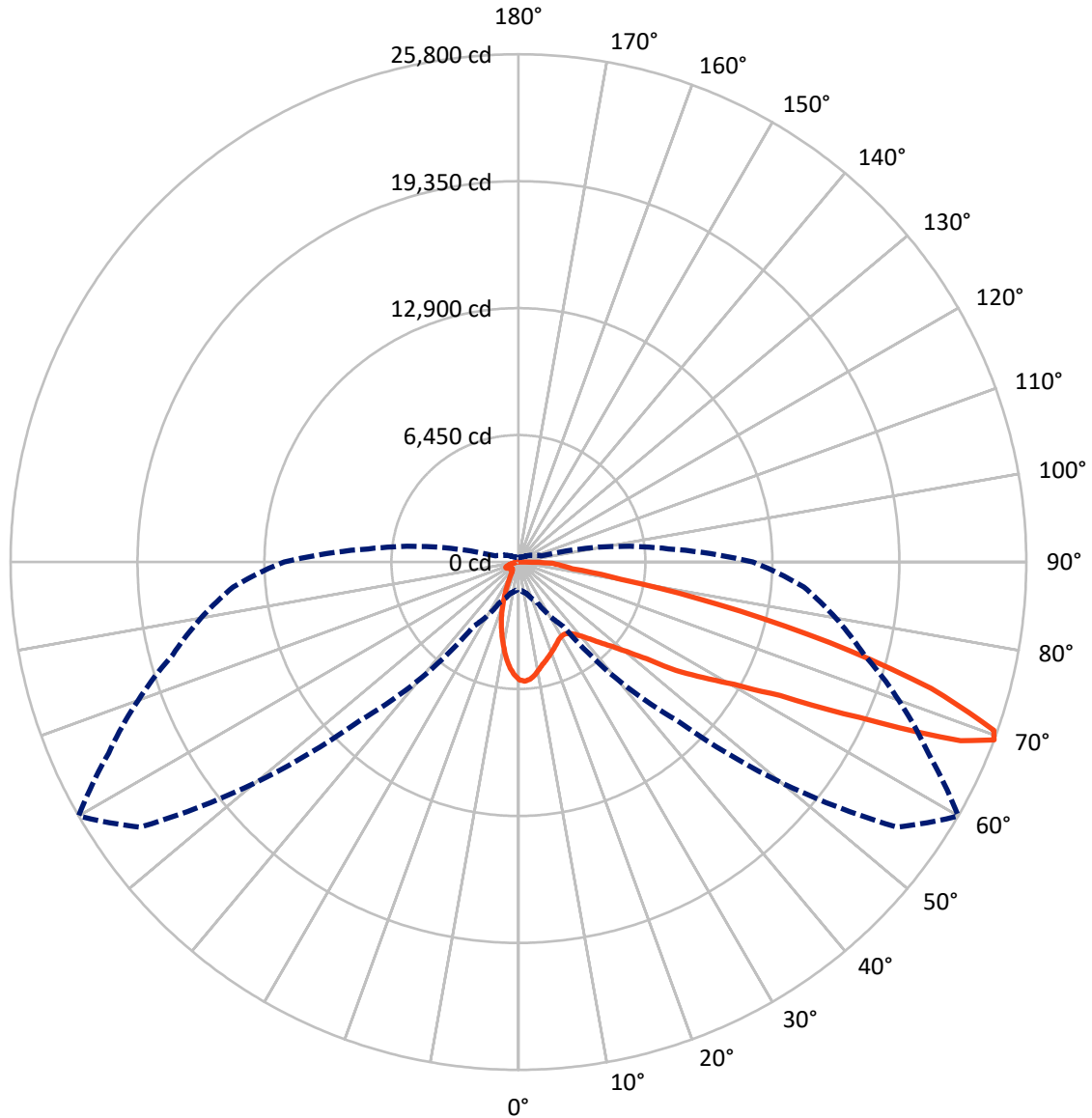
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.6 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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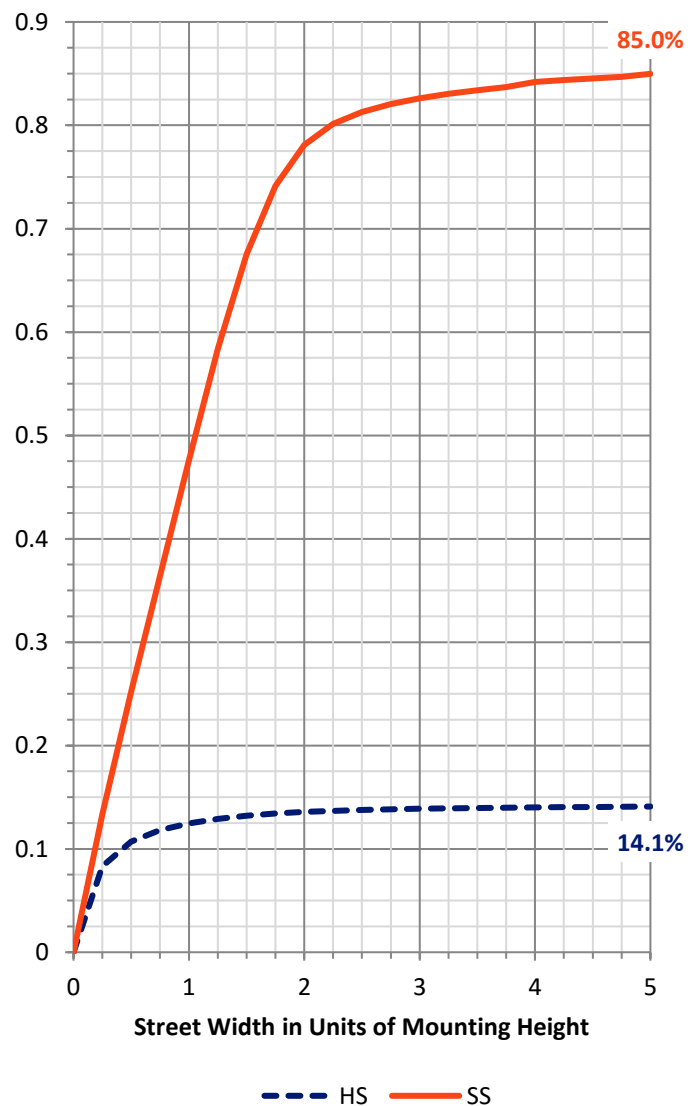
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3347.1	0.0	3347.1
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	20119.6	0.0	20119.6
	% Fixture	85.7	0.0	85.7
Total	Lumens	23466.7	0.0	23466.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	507.9	2.2
10°-20°	1087.6	4.6
20°-30°	1387.4	5.9
30°-40°	1909.2	8.1
40°-50°	3092.6	13.2
50°-60°	4853.7	20.7
60°-70°	6470.8	27.6
70°-80°	3599.2	15.3
80°-90°	558.2	2.4
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°	23466.7	100.0
0°-180°	23466.7	100.0

Coefficient of Utilization



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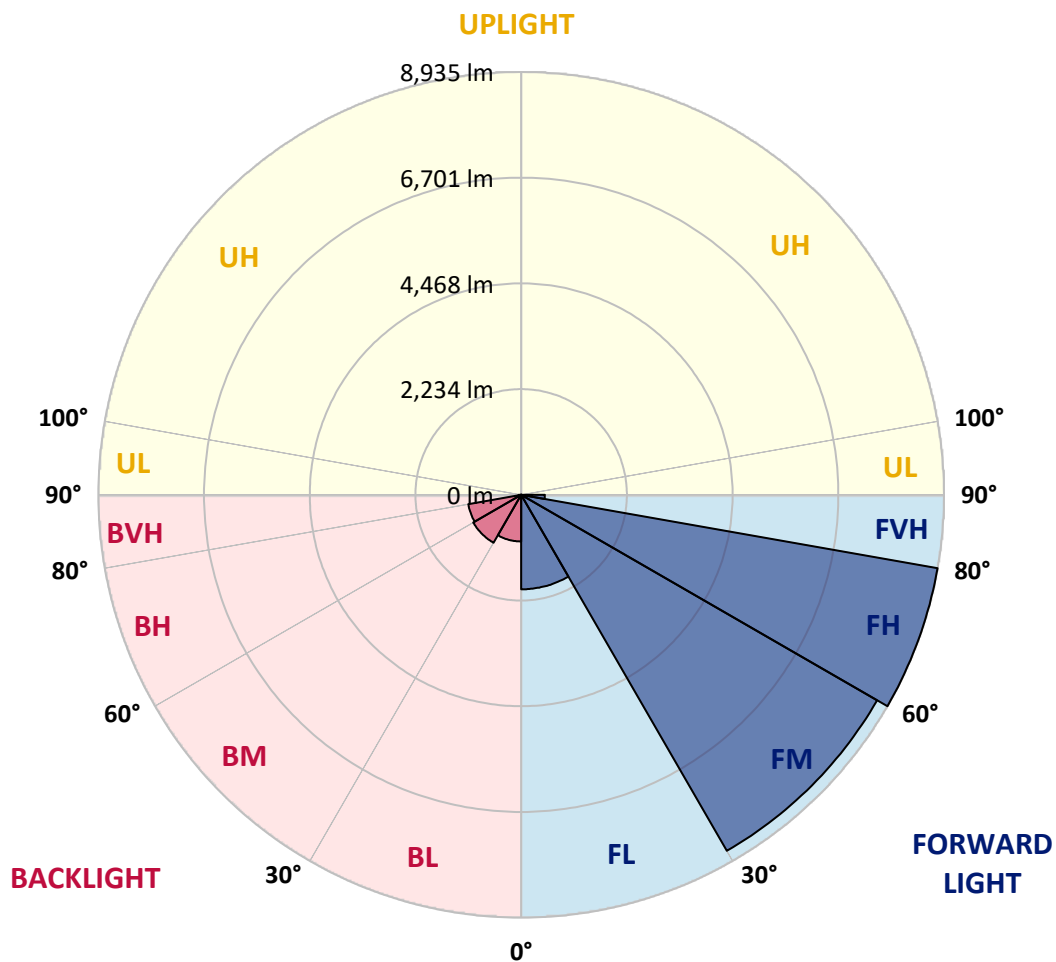
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1996.6	8.5			
FM	(30°-60°)	8686.2	37.0			
FH	(60°-80°)	8935.2	38.1			G4/12000
FVH	(80°-90°)	501.7	2.1			G4/750
BL	(0°-30°)	986.4	4.2	B2/1000		
BM	(30°-60°)	1169.3	5.0	B2/2500		
BH	(60°-80°)	1134.8	4.8	B3/2500		G3/2500
BVH	(80°-90°)	56.6	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6
2.5°	6147.2	6163.7	6163.7	6150.1	6142.5	6099.0	6073.4	6055.3	6023.7	5965.0	5912.3
5°	5927.5	5959.0	5972.5	5978.5	6017.7	6004.2	6005.7	5993.6	5966.5	5903.4	5817.5
7.5°	5524.1	5530.1	5554.2	5594.8	5689.6	5755.9	5810.1	5820.6	5814.6	5767.9	5647.5
10°	5126.9	5137.4	5166.0	5235.1	5325.6	5420.3	5537.7	5585.8	5621.9	5606.8	5454.9
12.5°	4797.3	4798.7	4830.5	4910.2	5010.9	5129.8	5289.3	5364.6	5450.4	5485.1	5314.9
15°	4479.7	4500.8	4531.0	4627.2	4752.1	4902.7	5086.2	5190.1	5302.9	5402.3	5206.6
17.5°	4239.0	4255.5	4273.6	4353.4	4497.8	4685.9	4913.2	5024.5	5173.5	5325.6	5095.3
20°	4106.6	4112.6	4099.1	4138.2	4260.1	4463.2	4726.5	4860.5	5038.1	5251.8	4980.9
22.5°	4079.5	4079.5	4029.8	4022.4	4076.5	4248.0	4533.9	4698.0	4914.7	5200.6	4878.5
25°	4205.9	4196.8	4103.6	4017.8	3998.3	4085.5	4350.3	4552.1	4809.4	5199.1	4801.8
27.5°	4445.2	4433.2	4317.3	4172.8	4047.9	4010.3	4208.8	4415.0	4726.5	5250.2	4762.7
30°	4743.2	4738.6	4621.2	4440.7	4234.6	4040.4	4153.3	4344.3	4671.0	5345.1	4761.2
32.5°	5069.6	5048.7	4976.4	4795.8	4527.9	4207.5	4186.4	4347.3	4655.9	5483.5	4795.8
35°	5417.3	5402.3	5384.2	5202.1	4901.2	4502.3	4332.3	4451.2	4729.7	5676.1	4893.6
37.5°	5859.7	5843.1	5873.2	5674.6	5345.1	4889.2	4579.0	4658.9	4880.1	5956.0	5075.7
40°	6646.7	6598.6	6514.2	6208.7	5862.8	5363.1	4935.8	4947.8	5137.4	6330.7	5367.6
42.5°	7939.4	7784.2	7367.5	6806.2	6408.9	5913.8	5400.6	5343.6	5492.6	6825.8	5792.0
45°	9234.9	9060.5	8356.1	7457.8	6974.8	6505.3	5975.6	5838.6	5935.0	7402.1	6338.2
47.5°	10071.6	9985.9	9191.3	8109.3	7567.7	7149.3	6633.1	6407.4	6476.7	8055.2	7012.4
50°	10317.0	10243.2	9618.6	8619.5	8127.5	7927.3	7447.2	7147.8	7159.9	8818.1	7820.4
52.5°	10133.4	10103.2	9689.4	8935.6	8642.1	8747.4	8574.3	8157.6	8058.2	9654.8	8696.3
55°	9888.1	9898.6	9739.1	9253.0	9165.8	9511.9	10049.0	9713.4	9292.2	10526.0	9608.1
57.5°	9116.0	9123.5	9541.9	9857.9	10164.9	10583.3	11197.2	11055.7	10565.3	11466.5	10630.0
60°	7340.5	7399.1	8330.6	9733.1	11307.0	12694.5	12844.9	12601.2	11919.5	12550.1	11958.7
62.5°	5244.2	5296.9	6375.9	8449.4	11173.2	15084.2	15887.7	14918.6	13757.0	14170.7	13827.7
65°	2755.3	2746.2	3581.4	5838.6	9411.0	15637.8	20682.0	19032.8	16852.2	16399.3	15633.4
67.5°	1539.5	1589.0	1912.6	2944.9	6133.6	13763.0	23744.2	24230.3	21156.0	18167.4	15555.1
69°	1423.5	1440.1	1656.8	2276.8	3998.3	11355.2	23480.9	25799.8	22970.7	18175.0	14552.9
70°	1382.9	1400.9	1598.1	2097.7	3358.7	9304.2	22522.3	25616.3	23411.7	17771.7	13641.0
72.5°	1240.0	1264.0	1455.2	1885.5	2830.6	4795.8	18141.9	21924.9	21207.1	15532.6	10577.3
75°	1057.8	1098.5	1387.4	1871.9	2681.5	3048.8	12098.6	16334.6	15783.8	11108.4	6001.2
77.5°	437.9	442.4	606.4	1370.8	2814.0	2917.8	6502.2	10347.0	9159.8	4871.0	1807.2
80°	305.5	299.5	302.4	400.3	2270.7	2937.3	3336.1	5262.3	4090.0	1285.1	845.6
82.5°	257.3	254.3	266.4	251.3	768.9	3333.2	2789.9	2743.3	1926.1	692.1	403.2
85°	170.0	165.5	218.2	228.7	365.7	2647.0	3000.6	2156.3	1435.5	370.2	171.5
87.5°	82.8	84.2	124.9	155.0	194.2	838.1	2874.2	1705.0	1109.1	161.0	69.3
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°	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6	5987.6
2.5°	5891.3	5846.1	5805.5	5754.3	5715.3	5682.1	5637.0	5635.5	5628.0	5638.6	5641.5
5°	5760.3	5685.1	5570.8	5442.9	5352.6	5233.7	5117.8	5078.7	5035.1	5030.6	5044.1
7.5°	5563.3	5445.9	5250.2	5054.7	4859.0	4658.9	4469.2	4373.0	4279.6	4251.1	4264.6
10°	5343.6	5194.6	4895.2	4576.1	4300.8	4002.8	3713.8	3527.2	3357.2	3285.0	3303.0
12.5°	5172.0	4982.4	4561.0	4147.3	3734.9	3307.6	2926.8	2558.2	2279.8	2154.9	2162.3
15°	5024.5	4782.3	4248.0	3697.4	3181.2	2595.8	2067.6	1640.2	1396.5	1306.2	1303.1
17.5°	4865.0	4571.6	3921.6	3279.0	2609.3	1885.5	1384.5	1131.6	1035.3	1005.1	1005.1
20°	4695.0	4354.8	3579.9	2823.0	2007.4	1316.7	1041.4	943.6	907.4	898.3	896.9
22.5°	4537.0	4142.7	3236.8	2336.9	1452.2	999.1	886.3	848.7	842.7	850.2	850.2
25°	4412.1	3956.2	2889.3	1825.2	1056.3	836.7	788.6	784.1	806.6	833.6	838.1
27.5°	4318.8	3789.1	2546.2	1333.3	830.7	728.3	711.9	731.4	784.1	838.1	848.7
30°	4254.1	3646.1	2135.4	958.5	692.1	638.1	645.6	680.1	759.9	842.7	865.3
32.5°	4225.5	3530.2	1721.5	735.9	591.4	561.3	580.8	625.9	708.8	791.5	818.6
35°	4252.6	3446.0	1339.3	611.0	517.7	495.1	517.7	564.4	618.5	659.1	675.7
37.5°	4350.3	3415.9	1008.3	541.7	469.5	447.0	465.0	496.6	520.6	535.7	543.2
40°	4556.5	3447.4	790.1	505.7	442.4	416.9	421.3	436.4	453.0	465.0	466.5
42.5°	4884.6	3551.4	702.7	492.1	425.9	392.8	385.2	395.7	413.9	430.4	433.4
45°	5320.9	3724.4	693.7	496.6	418.4	373.2	358.2	368.6	392.8	419.9	424.4
47.5°	5885.2	3998.3	735.9	520.6	422.9	362.6	340.2	350.6	382.2	418.4	424.4
50°	6553.4	4377.5	814.1	556.7	443.9	362.6	332.5	341.6	374.6	415.3	421.3
52.5°	7340.5	4905.6	895.4	592.8	473.9	376.2	335.5	334.2	364.2	401.7	409.2
55°	8208.6	5561.8	973.6	624.5	490.6	394.2	343.1	325.0	349.1	379.2	385.2
57.5°	9230.4	6460.1	1110.5	654.6	499.7	407.7	352.2	316.0	329.5	350.6	355.1
60°	10616.4	7779.8	1376.8	705.7	516.1	413.9	353.7	307.0	305.5	320.5	322.0
62.5°	12423.7	9325.3	1631.2	765.9	549.2	415.3	347.7	301.0	285.9	290.4	290.4
65°	13708.8	9894.1	1557.5	817.1	579.4	413.9	341.6	296.4	270.9	263.4	263.4
67.5°	12977.4	8739.8	1322.7	830.7	582.4	397.2	328.0	285.9	257.3	239.3	239.3
69°	11903.0	7660.9	1214.4	806.6	558.4	377.7	313.0	275.4	248.3	227.3	227.3
70°	11027.2	6843.8	1148.2	778.0	529.7	361.1	299.5	264.9	239.3	221.2	219.7
72.5°	8232.8	4567.0	981.1	671.2	434.9	305.5	261.7	236.2	215.2	203.1	203.1
75°	4344.3	2288.8	803.6	547.7	335.5	243.7	215.2	198.7	186.7	185.0	183.5
77.5°	1423.5	1035.3	577.9	412.4	246.8	189.6	171.5	161.0	159.5	165.5	165.5
80°	768.9	618.5	371.7	278.4	171.5	141.5	132.4	130.9	135.5	144.4	144.4
82.5°	373.2	305.5	221.2	171.5	117.4	103.8	103.8	105.3	111.3	122.0	122.0
85°	161.0	144.4	128.0	96.2	72.2	64.7	73.8	81.3	85.8	93.3	96.2
87.5°	76.7	67.7	58.7	37.5	31.5	33.1	39.2	48.2	57.2	63.2	64.7
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)