

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: P196606

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196606
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-04-D-UNV-SL3-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 3000K, 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: 21973.1 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 258
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

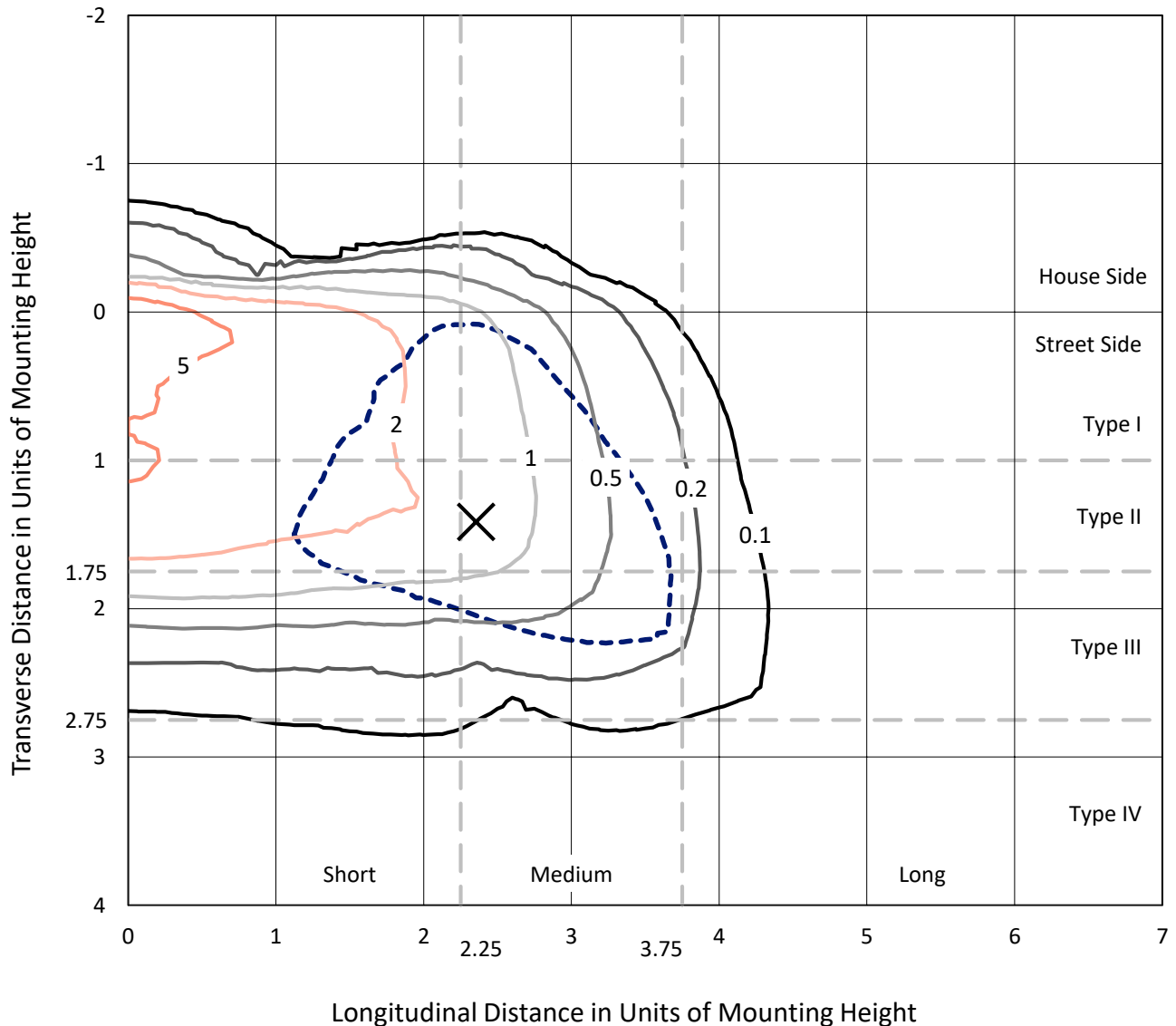


REPORT NUMBER: P196606

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-1200-HSS

Iso-Footcandle Lines of Horizontal Illumination

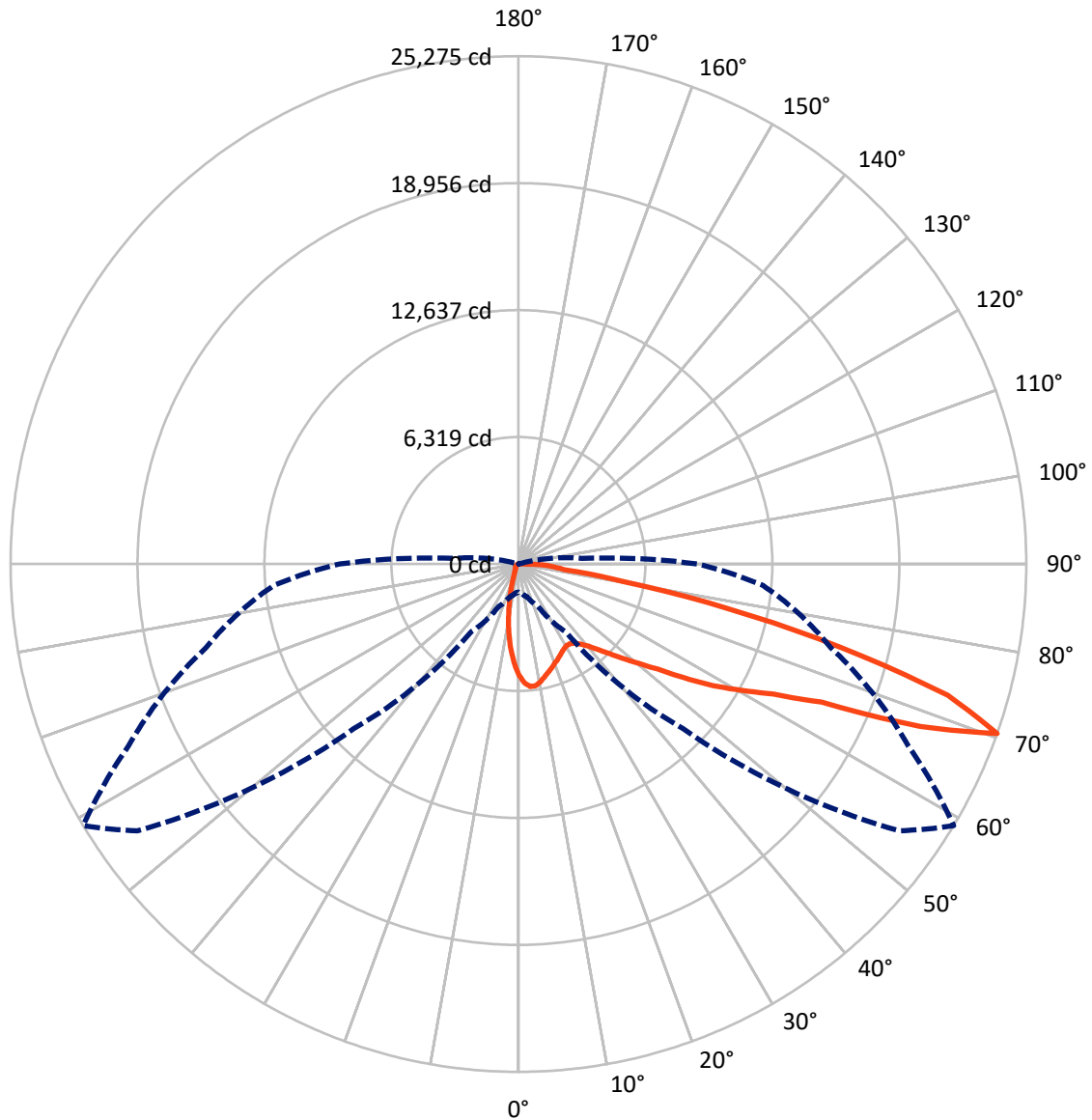
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P196606
CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-1200-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196606

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-1200-HSS

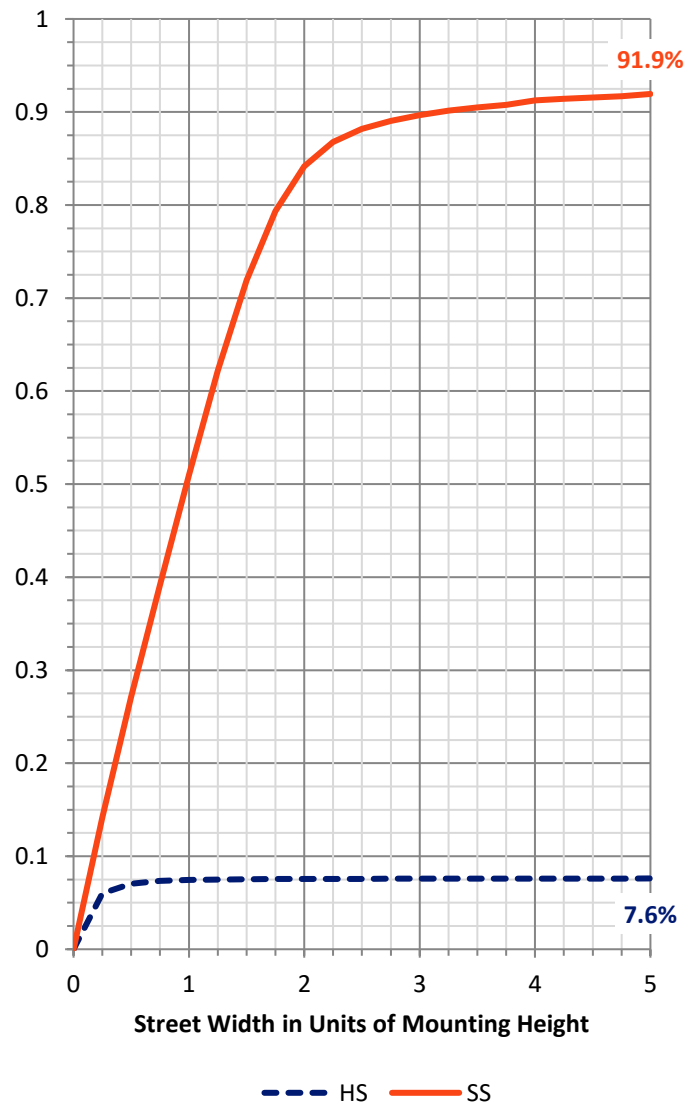
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1689.2	0.0	1689.2
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	20284.0	0.0	20284.0
	% Fixture	92.3	0.0	92.3
Total	Lumens	21973.1	0.0	21973.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	456.9	2.1
10°-20°	958.3	4.4
20°-30°	1297.2	5.9
30°-40°	1872.1	8.5
40°-50°	3109.1	14.1
50°-60°	4755.7	21.6
60°-70°	5915.0	26.9
70°-80°	3269.8	14.9
80°-90°	339.1	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°	21973.1	100.0
0°-180°	21973.1	100.0



REPORT NUMBER: P196606

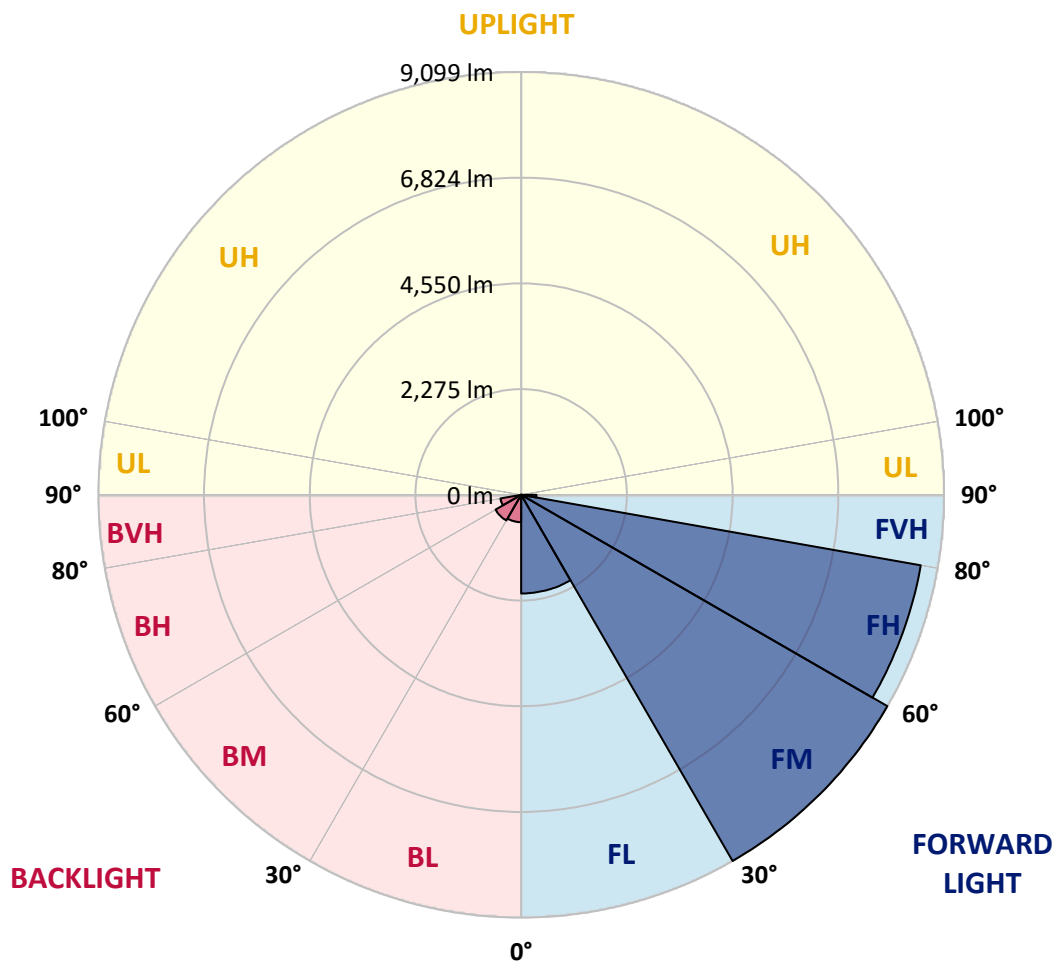
CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-1200-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2123.8	9.7			
FM	(30°-60°)	9099.3	41.4			
FH	(60°-80°)	8731.7	39.7			G4/12000
FVH	(80°-90°)	329.3	1.5			G3/500
BL	(0°-30°)	588.6	2.7	B2/1000		
BM	(30°-60°)	637.6	2.9	B1/1000		
BH	(60°-80°)	453.1	2.1	B1/500		G1/500
BVH	(80°-90°)	9.8	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type III Medium





REPORT NUMBER: P196606

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2
2.5°	6280.6	6270.6	6229.2	6220.9	6174.5	6081.7	5974.0	5930.8	5842.9	5703.8	5549.6
5°	6385.0	6390.0	6393.3	6375.1	6368.4	6292.1	6172.8	6121.5	6003.8	5775.0	5493.2
7.5°	5993.9	6007.1	6048.5	6066.7	6146.3	6176.1	6151.3	6118.1	6025.3	5755.1	5358.9
10°	5581.1	5606.0	5650.7	5680.5	5778.2	5857.9	5959.0	5967.3	5947.4	5688.8	5208.2
12.5°	5226.3	5249.6	5299.3	5358.9	5458.4	5561.2	5712.1	5765.1	5831.3	5645.8	5100.3
15°	4921.4	4928.0	4976.1	5050.6	5181.6	5322.4	5501.5	5579.5	5708.7	5629.1	5017.5
17.5°	4654.5	4656.2	4687.7	4755.6	4914.7	5100.3	5309.2	5412.0	5576.1	5606.0	4944.5
20°	4478.7	4477.1	4478.7	4515.2	4656.2	4876.6	5130.3	5238.0	5448.4	5577.8	4870.0
22.5°	4419.1	4410.8	4372.7	4359.5	4448.9	4642.9	4946.2	5087.1	5334.1	5569.5	4815.3
25°	4492.0	4487.1	4405.9	4329.6	4337.9	4458.9	4758.9	4931.3	5244.6	5599.3	4802.1
27.5°	4727.4	4717.5	4593.2	4444.0	4349.5	4371.0	4619.7	4800.3	5173.3	5672.2	4820.3
30°	5035.8	5037.4	4904.7	4724.2	4502.0	4379.3	4545.0	4715.8	5125.3	5781.7	4860.1
32.5°	5378.9	5377.2	5282.6	5073.9	4790.4	4531.8	4578.3	4722.4	5131.9	5942.4	4936.3
35°	5733.6	5715.4	5683.8	5499.9	5168.3	4798.6	4729.1	4835.2	5201.5	6154.6	5065.6
37.5°	6143.0	6136.3	6167.9	5974.0	5635.8	5191.6	4994.2	5065.6	5377.2	6467.9	5274.4
40°	6794.4	6758.0	6772.9	6509.3	6162.9	5720.3	5365.6	5383.9	5657.3	6882.2	5604.2
42.5°	8035.9	7888.4	7611.6	7117.7	6743.1	6307.1	5851.3	5819.8	6053.5	7384.5	6038.5
45°	9519.5	9350.4	8652.6	7789.0	7323.2	6937.0	6451.3	6366.7	6540.8	7982.9	6598.8
47.5°	10757.6	10575.4	9650.5	8490.1	7913.3	7586.8	7115.9	7016.5	7124.2	8677.5	7271.9
50°	11180.4	11079.3	10267.1	9073.7	8508.3	8316.0	7949.8	7783.9	7810.5	9426.7	8057.6
52.5°	10986.4	10951.6	10407.9	9473.1	9058.6	9121.6	8863.1	8689.1	8659.3	10245.5	8926.1
55°	10577.1	10560.5	10295.3	9695.2	9544.4	9859.3	10144.4	9993.5	9711.7	11115.7	9643.8
57.5°	9991.9	10054.9	10245.5	10122.9	10141.1	10638.3	11334.5	11412.4	10991.4	11808.6	10175.9
60°	8428.8	8597.8	9471.4	10582.0	11432.4	11934.6	12609.2	12755.2	12075.5	12282.7	10790.9
62.5°	6230.8	6472.8	7717.7	9758.2	12143.4	14399.4	14304.9	14240.3	13109.8	12917.5	11909.7
65°	3659.9	3943.3	4996.0	7624.8	11071.0	15984.1	17470.9	16575.8	14686.2	14236.9	13691.6
67.5°	1823.3	1824.9	2300.7	4024.6	8181.8	14878.5	22092.2	21575.1	18037.8	16181.3	14394.5
70°	1402.4	1440.5	1702.4	2338.8	4137.3	11588.1	23151.5	25274.8	21406.0	16095.1	12213.1
72.5°	1188.5	1213.4	1515.0	2035.5	3093.0	6361.8	20041.9	22340.9	20426.3	13598.9	9002.3
75°	855.3	875.1	1340.9	1846.6	2847.8	3156.1	13748.0	16569.1	15326.1	9565.8	4954.5
77.5°	212.2	210.6	467.4	1498.5	2547.7	2628.9	7888.4	10625.1	8793.5	3916.8	1273.0
80°	94.5	91.1	106.1	315.0	2370.4	2481.4	3469.3	5365.6	3373.2	634.9	389.5
82.5°	66.3	63.1	66.3	116.1	792.3	2302.4	2096.8	2325.6	1234.8	217.1	165.7
85°	21.6	19.8	36.5	97.8	222.2	1327.7	2045.5	1737.1	918.4	92.9	111.0
87.5°	3.3	3.3	13.2	53.0	64.7	442.6	1200.1	1203.4	412.8	54.7	49.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196606

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2	5556.2
2.5°	5471.7	5373.9	5236.2	5098.7	4974.3	4846.7	4744.0	4696.0	4674.3	4644.5	4579.9
5°	5345.7	5168.3	4866.6	4570.0	4293.2	4028.0	3800.8	3671.5	3532.4	3525.7	3457.7
7.5°	5143.5	4891.5	4415.8	3954.9	3532.4	3127.9	2779.8	2554.4	2400.2	2304.1	2237.7
10°	4918.1	4594.8	3964.9	3316.8	2741.7	2201.2	1753.7	1462.0	1284.7	1195.1	1143.7
12.5°	4739.0	4332.9	3520.7	2705.2	1984.1	1364.2	948.2	736.0	641.5	605.0	588.5
15°	4584.8	4092.6	3104.6	2158.2	1324.4	784.1	548.7	479.0	464.2	464.2	462.5
17.5°	4429.1	3860.4	2700.3	1621.1	833.7	513.8	432.6	422.8	424.4	429.3	429.3
20°	4281.6	3640.1	2310.7	1155.3	547.0	411.1	392.9	389.5	394.5	401.1	399.5
22.5°	4162.2	3446.1	1946.0	794.0	420.9	372.9	361.3	356.4	359.7	364.7	363.0
25°	4077.7	3280.4	1611.1	553.6	366.3	339.8	326.5	319.9	316.7	319.9	318.3
27.5°	4026.3	3141.1	1296.3	416.1	328.3	306.7	290.1	276.9	268.6	268.6	265.2
30°	3993.1	3010.2	1016.1	344.8	296.7	273.4	250.3	232.0	218.8	215.5	213.8
32.5°	3991.5	2897.4	759.2	305.0	266.9	240.4	212.2	189.0	174.0	170.8	169.1
35°	4032.9	2806.4	558.7	275.2	240.4	208.9	177.3	152.5	139.2	139.2	137.5
37.5°	4140.6	2753.3	422.8	252.0	218.8	182.4	149.1	125.9	114.4	117.7	117.7
40°	4341.2	2743.3	344.8	233.7	200.6	159.1	121.0	102.8	97.8	102.8	102.8
42.5°	4647.9	2796.4	306.7	220.4	184.0	135.9	101.1	87.9	86.2	91.1	91.1
45°	5047.3	2900.8	285.0	208.9	165.7	112.7	84.5	76.3	74.7	81.2	81.2
47.5°	5531.4	3041.7	265.2	195.6	147.5	92.9	71.2	64.7	64.7	71.2	72.9
50°	6104.9	3232.3	245.3	182.4	132.6	77.9	59.6	54.7	56.4	63.1	64.7
52.5°	6764.6	3466.0	227.0	170.8	116.1	63.1	49.7	46.4	48.1	54.7	56.4
55°	7333.2	3669.9	205.5	159.1	94.5	51.4	41.4	39.8	41.4	49.7	49.7
57.5°	7828.8	3865.5	185.6	141.0	74.7	41.4	33.1	33.1	36.5	44.8	46.4
60°	8486.8	4173.8	169.1	119.3	56.4	31.4	26.6	28.2	33.1	39.8	41.4
62.5°	9652.1	4697.6	147.5	99.4	41.4	24.9	21.6	23.2	29.8	38.1	39.8
65°	11110.8	5193.2	122.7	82.9	31.4	18.2	16.6	21.6	29.8	38.1	39.8
67.5°	10961.6	4516.9	96.1	66.3	23.2	15.0	13.2	19.8	28.2	38.1	39.8
70°	8889.7	3166.0	71.2	44.8	18.2	13.2	13.2	19.8	28.2	36.5	38.1
72.5°	6166.1	1762.1	54.7	29.8	16.6	13.2	11.6	18.2	26.6	36.5	38.1
75°	2933.9	540.4	43.0	21.6	15.0	11.6	10.0	18.2	26.6	36.5	38.1
77.5°	563.6	137.5	34.9	18.2	13.2	11.6	10.0	16.6	26.6	34.9	36.5
80°	190.6	61.3	28.2	16.6	13.2	11.6	10.0	16.6	24.9	33.1	34.9
82.5°	104.5	34.9	24.9	15.0	13.2	10.0	8.3	15.0	23.2	33.1	34.9
85°	81.2	24.9	19.8	15.0	13.2	10.0	8.3	15.0	23.2	31.4	33.1
87.5°	41.4	18.2	16.6	15.0	13.2	10.0	8.3	13.2	21.6	29.8	33.1
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)