

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: P196074

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196074
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL2-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30058.4 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 333
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

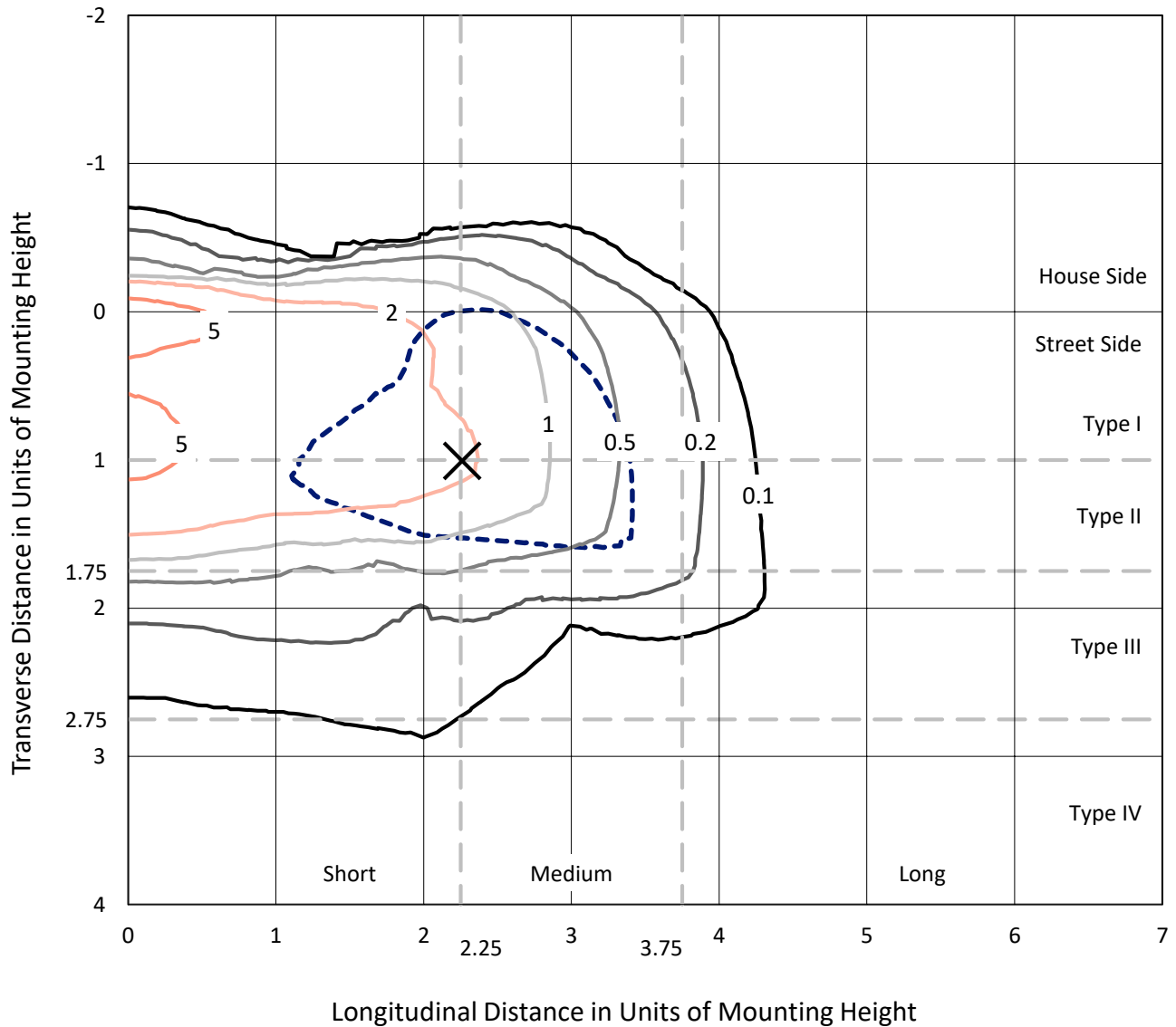


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Iso-Footcandle Lines of Horizontal Illumination

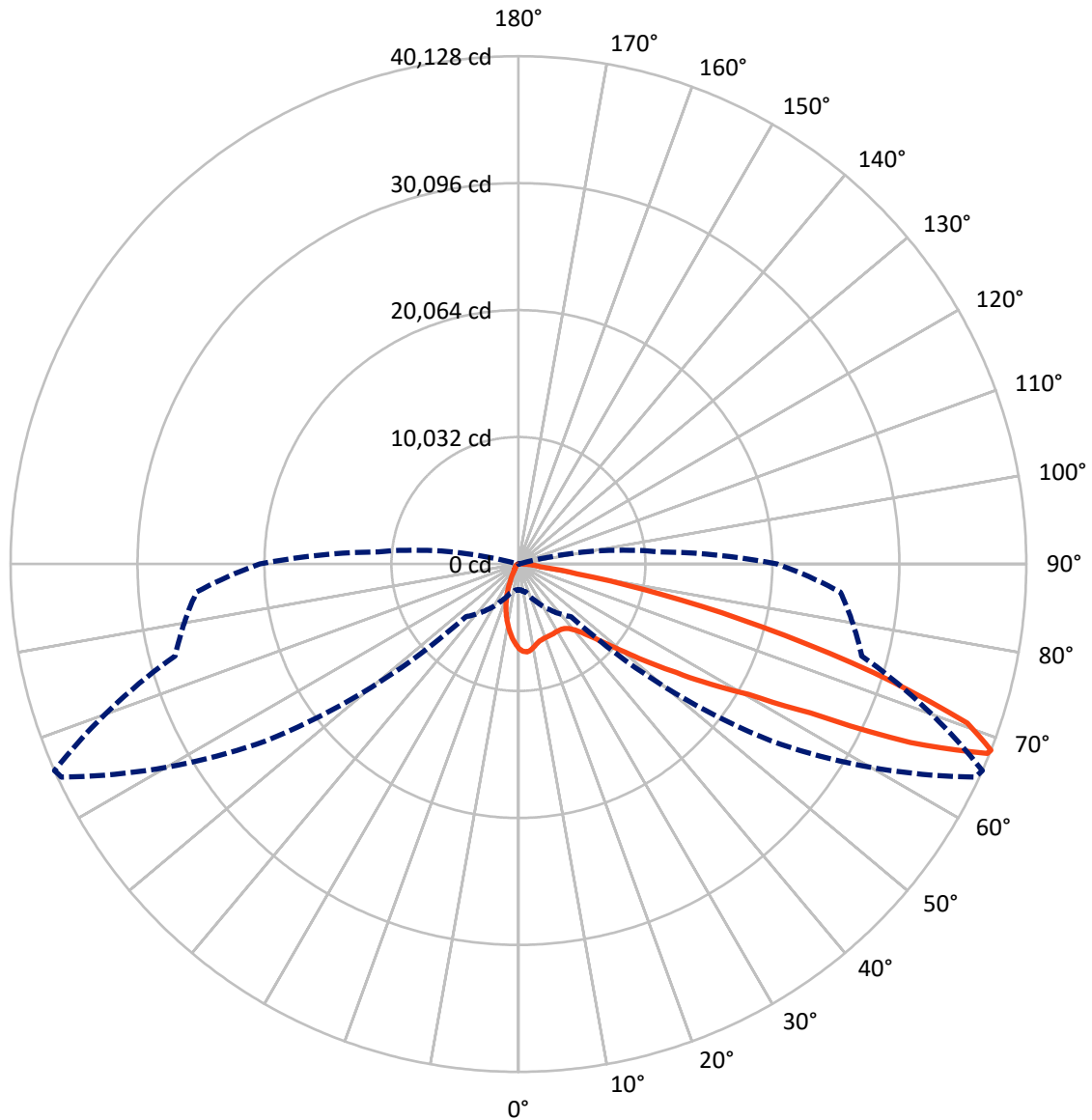
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.4 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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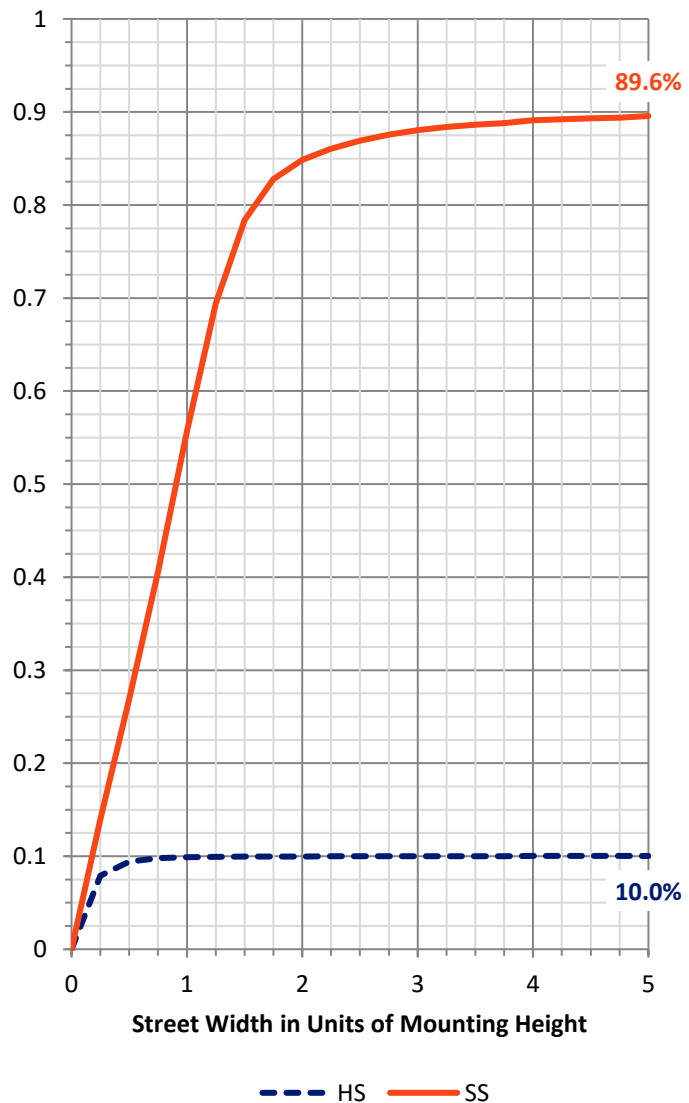
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3044.6	0.0	3044.6
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	27013.8	0.0	27013.8
	% Fixture	89.9	0.0	89.9
Total	Lumens	30058.4	0.0	30058.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	549.0	1.8
10°-20°	1181.2	3.9
20°-30°	1711.7	5.7
30°-40°	2620.3	8.7
40°-50°	4481.8	14.9
50°-60°	7010.8	23.3
60°-70°	8072.7	26.9
70°-80°	4039.7	13.4
80°-90°	391.2	1.3
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°	30058.4	100.0
0°-180°	30058.4	100.0

Coefficient of Utilization



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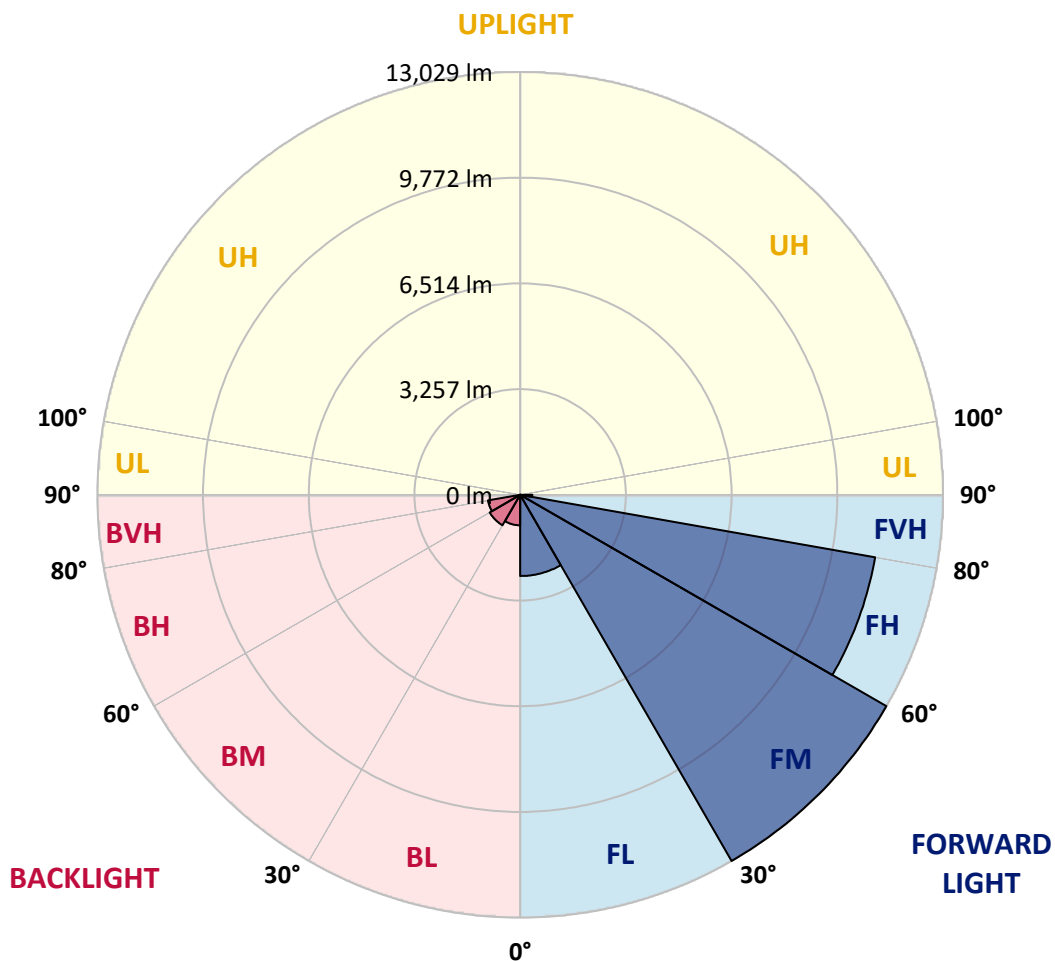
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2502.2	8.3			
FM (30°-60°)	13028.7	43.3			
FH (60°-80°)	11106.5	36.9			G4/12000
FVH (80°-90°)	376.4	1.3			G3/500
BL (0°-30°)	939.7	3.1	B2/1000		
BM (30°-60°)	1084.2	3.6	B2/2500		
BH (60°-80°)	1005.9	3.3	B3/2500		G3/2500
BVH (80°-90°)	14.8	0.0			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7
2.5°	7043.6	7048.3	7046.0	7053.0	7048.3	7012.9	6975.2	6894.9	6902.1	6798.2	6682.5
5°	6548.1	6588.2	6628.3	6668.4	6765.2	6850.1	6951.6	6975.2	6975.2	6885.5	6715.6
7.5°	6043.1	6045.4	6090.2	6144.6	6274.4	6430.1	6666.1	6878.4	6883.1	6906.8	6720.3
10°	5663.2	5675.0	5705.7	5764.6	5894.4	6047.8	6312.1	6644.8	6670.8	6845.4	6673.1
12.5°	5368.2	5382.4	5415.4	5483.8	5601.9	5759.9	6038.4	6418.3	6453.7	6786.4	6659.0
15°	5141.7	5160.6	5186.6	5255.0	5382.4	5549.9	5854.3	6267.3	6309.8	6762.8	6703.8
17.5°	5047.3	5047.3	5045.0	5092.1	5219.6	5389.5	5708.1	6187.0	6241.3	6781.7	6779.3
20°	5087.4	5080.4	5030.8	5019.0	5096.9	5266.8	5592.4	6135.1	6196.5	6817.0	6871.4
22.5°	5299.8	5285.7	5174.7	5082.7	5059.1	5172.3	5514.5	6099.8	6172.9	6890.2	6994.0
25°	5750.5	5708.1	5554.6	5347.0	5160.6	5148.8	5460.3	6080.8	6158.7	6975.2	7128.5
27.5°	6335.6	6323.9	6078.5	5800.0	5441.4	5226.7	5443.7	6066.7	6144.6	7036.5	7237.1
30°	7062.5	7067.2	6784.0	6420.7	5877.9	5446.1	5495.7	6059.7	6139.9	7041.3	7284.3
32.5°	7812.9	7817.6	7581.6	7192.3	6474.9	5823.7	5642.0	6092.7	6165.8	7022.4	7281.9
35°	8534.9	8541.9	8400.4	8086.5	7272.5	6347.5	5918.1	6205.9	6257.8	7034.1	7277.2
37.5°	9448.1	9476.4	9301.8	9009.2	8273.0	7116.8	6368.7	6434.8	6477.3	7130.9	7312.6
40°	11005.5	10967.7	10467.4	9971.9	9358.5	8053.5	7020.0	6828.9	6843.0	7381.0	7447.1
42.5°	12820.0	12772.9	11916.3	11062.1	10474.5	9183.8	7853.0	7433.0	7430.6	7801.0	7739.6
45°	14382.2	14353.8	13452.4	12312.7	11711.0	10432.1	8879.4	8303.7	8275.4	8527.8	8273.0
47.5°	15491.2	15467.6	14785.6	13643.6	13140.9	11805.4	10160.7	9490.5	9431.6	9478.8	9138.9
50°	15599.7	15573.8	15335.5	14601.6	14811.6	13820.6	11744.1	11045.6	10970.1	10896.9	10448.6
52.5°	14585.0	14582.7	14707.8	14660.6	15982.0	16413.9	13686.1	12968.7	12879.1	12692.7	12246.7
55°	12510.9	12499.1	12973.5	13662.4	15956.1	19089.7	16647.4	15257.6	15139.6	14766.8	14181.6
57.5°	9141.3	9080.0	10071.1	11531.7	14835.2	20260.1	21350.2	18101.0	17905.1	16722.9	15821.6
60°	5047.3	5070.9	6345.2	8074.8	12180.6	20028.9	25677.9	21416.3	20901.9	18410.0	17501.7
62.5°	2829.3	2888.2	3836.8	5247.9	7765.6	18152.9	27999.8	27122.0	25883.1	20378.1	19625.3
65°	2140.2	2175.6	2652.3	4049.1	4896.3	12685.5	28370.2	35100.0	34031.0	23360.6	23006.7
67.5°	2015.1	2043.4	2277.1	3357.8	4459.8	6578.7	25581.1	39819.3	39953.8	27428.7	25625.9
68°	2029.3	2064.7	2298.3	3230.4	4452.7	5885.0	24391.9	39842.9	40128.4	28084.7	25536.2
70°	1864.1	1873.5	2430.4	3169.0	4315.8	4636.7	17645.6	37112.8	37624.8	28865.7	23181.3
72.5°	712.6	714.9	1090.2	2744.3	4521.1	4662.7	8888.8	29333.0	29358.9	25121.0	18072.7
75°	370.5	311.5	342.2	858.9	4318.2	4544.7	4459.8	20028.9	19903.8	16989.6	11073.9
77.5°	254.8	217.1	228.9	297.3	1795.7	4542.3	3221.0	11517.5	11491.5	7227.7	3159.6
80°	143.9	125.1	136.9	250.1	630.0	4263.9	3001.5	4950.6	4665.1	1269.5	512.1
82.5°	73.1	61.4	73.1	210.0	391.7	2682.9	2918.9	1942.0	1729.6	302.1	332.7
85°	18.9	18.9	35.4	146.3	243.1	880.1	2616.9	1401.6	1260.1	132.2	236.0
87.5°	4.7	2.4	14.1	54.3	87.3	191.1	1451.2	781.0	672.5	68.4	136.9
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°	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7	6696.7
2.5°	6635.4	6569.3	6439.5	6293.2	6189.4	6076.1	6010.0	5929.8	5868.5	5814.2	5854.3
5°	6611.7	6484.4	6196.5	5873.2	5601.9	5342.3	5148.8	4964.7	4825.5	4738.2	4773.6
7.5°	6550.5	6361.6	5894.4	5389.5	4945.9	4528.2	4188.4	3884.0	3648.0	3520.6	3560.7
10°	6446.6	6180.0	5552.3	4851.4	4230.9	3641.0	3136.0	2682.9	2340.8	2180.3	2218.1
12.5°	6371.0	6019.5	5198.3	4332.3	3515.9	2678.2	2008.1	1488.9	1222.3	1061.8	1076.0
15°	6338.1	5894.4	4868.0	3784.9	2734.9	1720.2	1085.5	785.7	693.8	660.7	663.1
17.5°	6342.8	5795.3	4554.2	3216.3	1946.7	988.7	665.4	599.3	585.2	578.1	578.1
20°	6354.6	5696.2	4228.5	2624.0	1245.9	637.1	554.5	533.3	526.2	516.8	519.1
22.5°	6390.0	5620.7	3900.5	2029.3	766.9	519.1	490.8	471.9	460.1	446.0	448.4
25°	6444.3	5564.1	3577.3	1460.7	540.3	453.1	427.1	401.1	379.9	363.4	365.7
27.5°	6477.3	5483.8	3232.7	995.7	448.4	396.4	361.0	325.6	302.1	287.9	285.5
30°	6453.7	5354.1	2841.0	653.7	396.4	342.2	299.7	259.5	236.0	224.1	224.1
32.5°	6390.0	5186.6	2409.3	476.7	351.6	294.9	243.1	207.7	191.1	184.0	186.4
35°	6316.8	5011.9	1949.1	403.5	316.2	250.1	198.2	169.9	162.9	160.5	160.5
37.5°	6276.7	4860.9	1507.8	365.7	283.2	207.7	162.9	146.3	139.2	139.2	139.2
40°	6321.5	4745.3	1116.1	337.5	250.1	172.3	136.9	125.1	122.7	122.7	122.7
42.5°	6512.7	4705.2	816.4	313.8	217.1	143.9	117.9	108.5	106.2	108.5	108.5
45°	6885.5	4792.5	618.3	290.2	186.4	117.9	101.5	94.4	94.4	96.8	96.8
47.5°	7517.9	5016.7	507.3	266.7	155.7	99.1	87.3	82.6	82.6	84.9	84.9
50°	8499.5	5432.0	455.4	240.7	129.8	84.9	73.1	70.8	70.8	73.1	75.5
52.5°	9990.9	6222.4	429.4	214.7	106.2	70.8	61.4	59.0	61.4	63.7	63.7
55°	11649.7	7234.7	398.7	188.7	89.7	59.0	49.5	49.5	51.9	56.7	56.7
57.5°	13195.2	8211.6	370.5	155.7	77.8	47.2	40.1	40.1	44.8	49.5	49.5
60°	14828.1	9169.6	332.7	125.1	66.1	37.7	33.0	33.0	40.1	44.8	47.2
62.5°	16845.6	10283.4	283.2	99.1	51.9	28.3	23.6	30.7	37.7	44.8	44.8
65°	19762.2	11668.5	221.8	77.8	40.1	21.3	18.9	28.3	35.4	42.5	44.8
67.5°	20821.7	11491.5	167.6	63.7	30.7	16.5	16.5	26.0	35.4	42.5	42.5
68°	20434.7	11104.5	160.5	61.4	28.3	16.5	16.5	26.0	35.4	42.5	42.5
70°	17806.0	9077.7	132.2	47.2	23.6	14.1	14.1	23.6	35.4	40.1	42.5
72.5°	13332.1	6031.3	113.2	30.7	21.3	14.1	11.8	23.6	33.0	40.1	40.1
75°	7647.7	2503.6	96.8	23.6	18.9	11.8	11.8	21.3	33.0	40.1	40.1
77.5°	2161.5	585.2	77.8	18.9	16.5	11.8	9.4	21.3	30.7	37.7	37.7
80°	396.4	174.6	61.4	16.5	14.1	11.8	9.4	21.3	30.7	37.7	37.7
82.5°	261.9	82.6	44.8	16.5	14.1	11.8	9.4	18.9	28.3	35.4	35.4
85°	195.9	59.0	28.3	16.5	14.1	11.8	9.4	18.9	28.3	35.4	35.4
87.5°	108.5	26.0	21.3	18.9	16.5	11.8	9.4	16.5	26.0	33.0	33.0
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)