

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: P196127

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196127  
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-SL3-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 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: 28643.7 lumens  
Efficiency: N/A  
Efficacy: 89.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G4

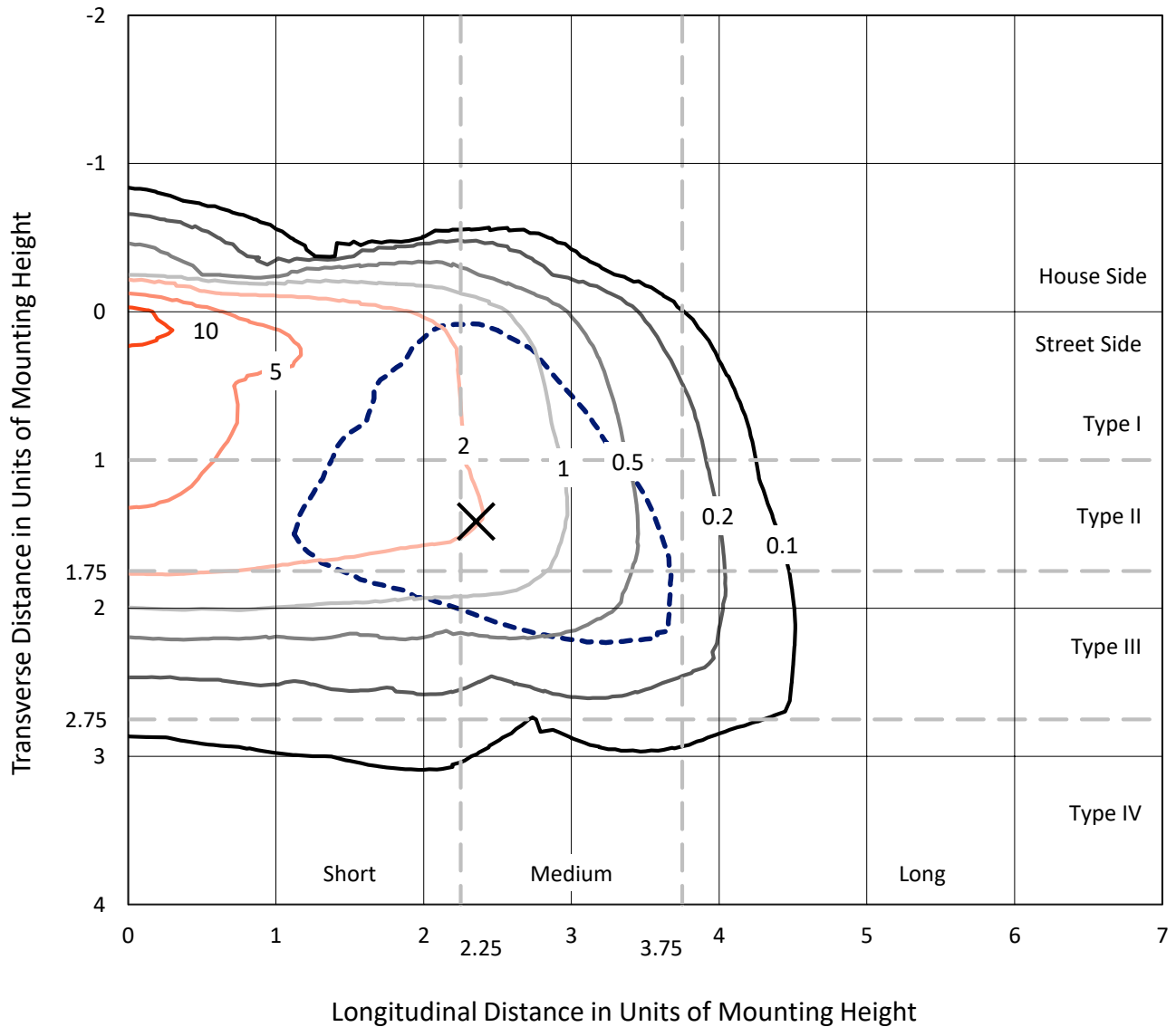
Input Watts (W): 320  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

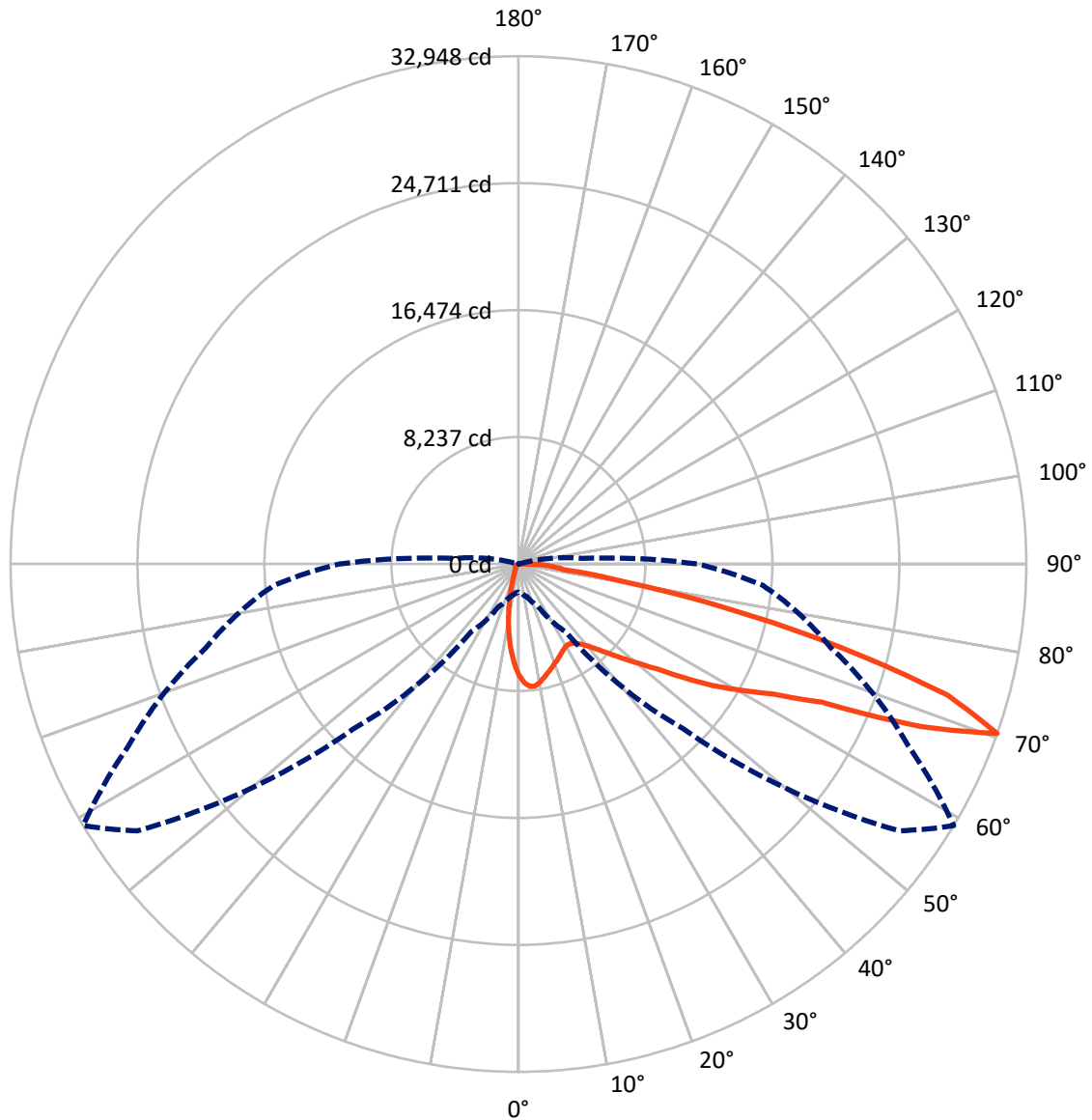
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.3 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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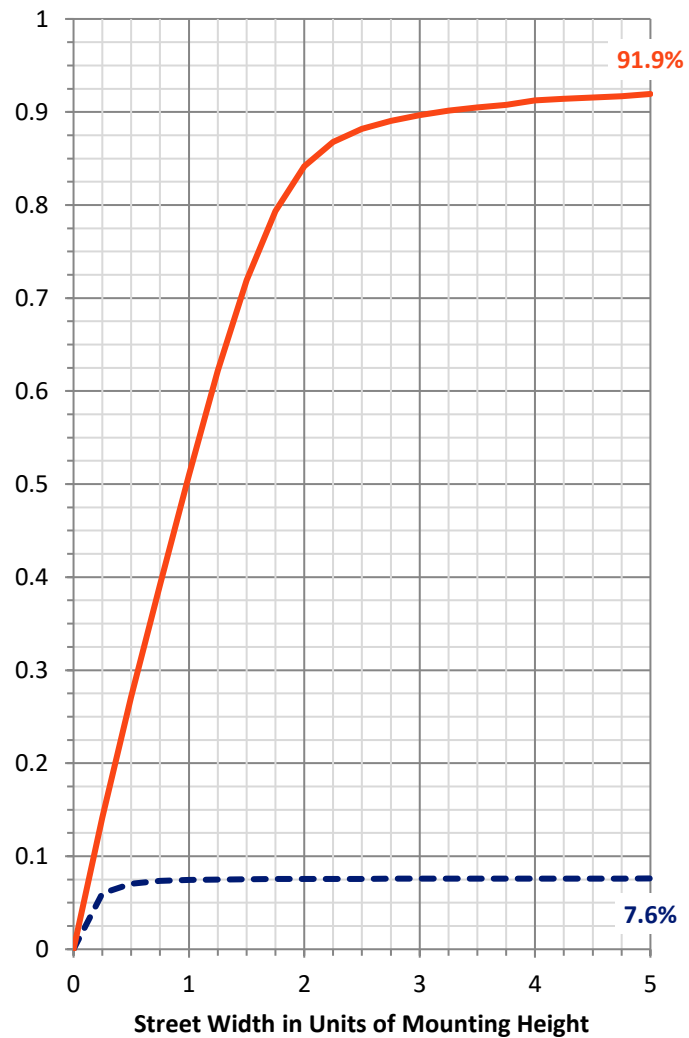
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2201.9	0.0	2201.9
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	26441.7	0.0	26441.7
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	28643.7	0.0	28643.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	595.6	2.1
10°-20°	1249.2	4.4
20°-30°	1691.0	5.9
30°-40°	2440.4	8.5
40°-50°	4053.0	14.1
50°-60°	6199.4	21.6
60°-70°	7710.7	26.9
70°-80°	4262.4	14.9
80°-90°	442.0	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°	28643.7	100.0
0°-180°	28643.7	100.0



--- HS    — SS

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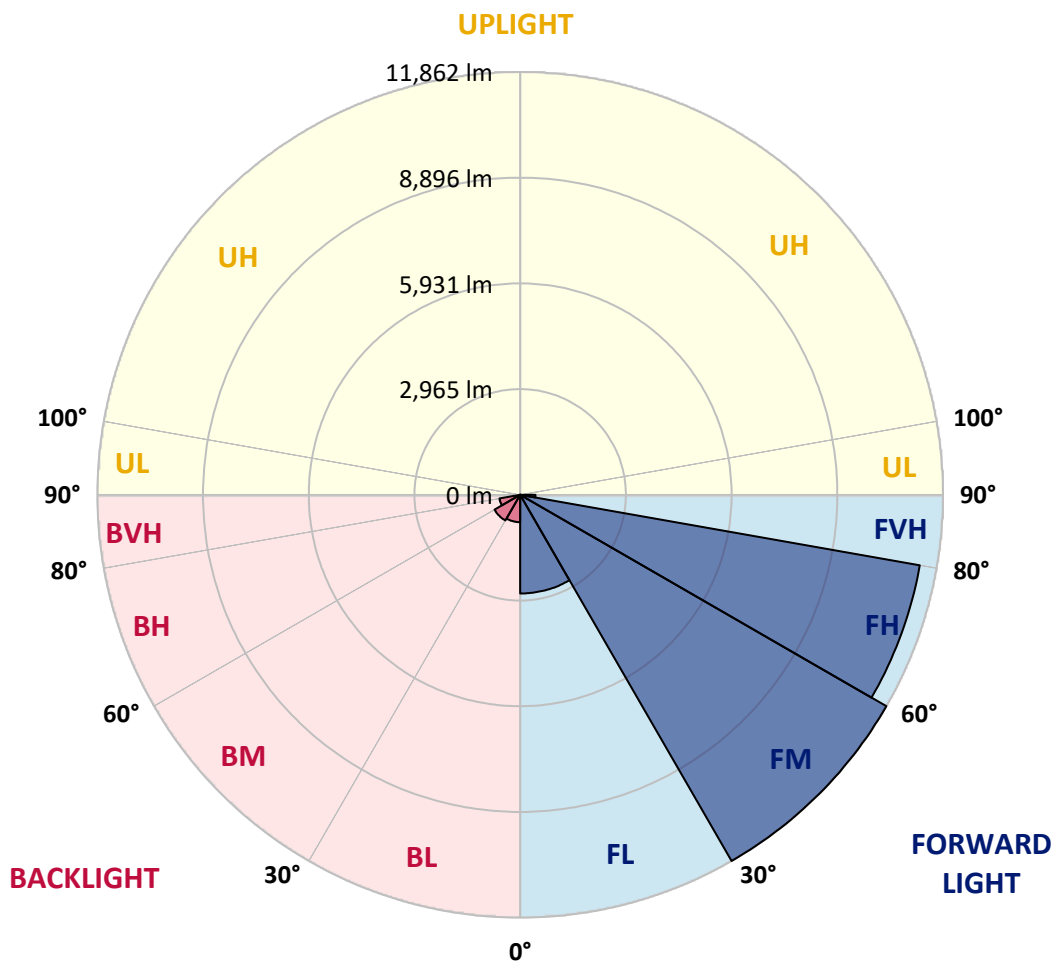
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2768.5	9.7			
FM	(30°-60°)	11861.6	41.4			
FH	(60°-80°)	11382.4	39.7			G4/12000
FVH	(80°-90°)	429.2	1.5			G3/500
BL	(0°-30°)	767.3	2.7	B2/1000		
BM	(30°-60°)	831.2	2.9	B1/1000		
BH	(60°-80°)	590.7	2.1	B2/1000		G2/1000
BVH	(80°-90°)	12.8	0.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9
2.5°	8187.2	8174.2	8120.2	8109.4	8048.9	7927.9	7787.4	7731.3	7616.8	7435.2	7234.3
5°	8323.3	8329.8	8334.2	8310.4	8301.8	8202.3	8046.7	7979.7	7826.4	7528.2	7160.9
7.5°	7813.4	7830.7	7884.7	7908.4	8012.2	8051.0	8018.7	7975.4	7854.4	7502.2	6985.8
10°	7275.3	7307.8	7366.1	7405.0	7532.5	7636.2	7768.0	7778.8	7752.8	7415.8	6789.2
12.5°	6813.0	6843.2	6908.0	6985.8	7115.4	7249.4	7446.1	7515.2	7601.6	7359.6	6648.8
15°	6415.3	6424.0	6486.6	6583.9	6754.6	6938.3	7171.6	7273.2	7441.8	7338.0	6540.6
17.5°	6067.5	6069.7	6110.7	6199.3	6406.7	6648.8	6921.0	7055.0	7268.9	7307.8	6445.6
20°	5838.4	5836.2	5838.4	5886.0	6069.7	6357.0	6687.6	6828.1	7102.4	7271.0	6348.4
22.5°	5760.6	5749.8	5700.2	5682.9	5799.5	6052.4	6447.8	6631.5	6953.4	7260.2	6277.0
25°	5855.7	5849.2	5743.4	5643.9	5654.8	5812.5	6203.6	6428.3	6836.7	7299.2	6259.7
27.5°	6162.6	6149.6	5987.5	5793.1	5669.9	5697.9	6022.1	6257.6	6743.8	7394.2	6283.6
30°	6564.5	6566.6	6393.7	6158.3	5868.7	5708.8	5924.8	6147.4	6681.1	7536.8	6335.4
32.5°	7011.7	7009.6	6886.4	6614.2	6244.7	5907.5	5968.1	6156.1	6689.8	7746.4	6434.8
35°	7474.2	7450.4	7409.3	7169.5	6737.4	6255.4	6164.7	6303.0	6780.5	8023.0	6603.4
37.5°	8007.9	7999.3	8040.3	7787.4	7346.6	6767.5	6510.5	6603.4	7009.6	8431.4	6875.7
40°	8857.0	8809.6	8829.0	8485.4	8033.7	7456.9	6994.4	7018.3	7374.8	8971.6	7305.6
42.5°	10475.5	10283.2	9922.3	9278.4	8790.1	8221.8	7627.5	7586.5	7891.1	9626.3	7871.7
45°	12409.4	12189.0	11279.3	10153.5	9546.4	9042.9	8409.8	8299.6	8526.5	10406.4	8602.1
47.5°	14023.5	13785.8	12580.0	11067.5	10315.5	9889.9	9276.2	9146.6	9287.1	11311.7	9479.4
50°	14574.5	14442.6	13383.9	11828.2	11091.3	10840.6	10363.1	10147.1	10181.6	12288.4	10503.6
52.5°	14321.7	14276.3	13567.6	12348.9	11808.6	11890.8	11553.7	11326.8	11288.0	13355.9	11635.9
55°	13787.9	13766.4	13420.6	12638.5	12441.8	12852.4	13224.0	13027.4	12660.0	14490.2	12571.5
57.5°	13025.2	13107.3	13355.9	13195.9	13219.7	13867.9	14775.4	14877.0	14328.2	15393.5	13265.0
60°	10987.6	11208.0	12346.7	13794.5	14903.0	15557.6	16437.1	16627.2	15741.3	16011.4	14066.7
62.5°	8122.4	8437.8	10060.6	12720.5	15829.9	18770.7	18647.6	18563.3	17089.6	16839.0	15525.2
65°	4771.0	5140.5	6512.6	9939.6	14431.9	20836.5	22774.7	21607.8	19144.5	18559.0	17848.0
67.5°	2376.8	2379.0	2999.2	5246.4	10665.6	19395.1	28798.9	28124.8	23513.6	21093.6	18764.3
70°	1828.0	1877.7	2219.1	3048.9	5393.3	15106.0	30179.7	32947.6	27904.4	20981.2	15920.7
72.5°	1549.3	1581.7	1974.9	2653.4	4032.1	8293.1	26126.1	29123.0	26627.3	17727.0	11735.2
75°	1114.9	1140.9	1748.1	2407.1	3712.2	4114.1	17921.6	21599.2	19978.6	12469.9	6458.6
77.5°	276.6	274.5	609.4	1953.3	3321.1	3427.0	10283.2	13850.7	11463.0	5106.0	1659.4
80°	123.2	118.9	138.3	410.5	3089.9	3234.7	4522.6	6994.4	4397.2	827.6	507.8
82.5°	86.4	82.1	86.4	151.3	1032.9	3001.3	2733.4	3031.6	1609.8	283.1	216.0
85°	28.1	25.9	47.6	127.5	289.5	1730.8	2666.4	2264.5	1197.1	121.0	144.7
87.5°	4.3	4.3	17.3	69.2	84.3	576.9	1564.4	1568.7	538.1	71.3	64.9
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°	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9	7242.9
2.5°	7132.7	7005.3	6825.9	6646.5	6484.5	6318.2	6184.1	6121.5	6093.4	6054.5	5970.2
5°	6968.5	6737.4	6344.0	5957.3	5596.5	5250.7	4954.7	4786.2	4604.6	4596.0	4507.4
7.5°	6704.9	6376.5	5756.3	5155.7	4604.6	4077.4	3623.6	3329.8	3128.8	3003.5	2917.0
10°	6411.0	5989.7	5168.6	4323.7	3574.0	2869.5	2286.1	1905.9	1674.6	1558.0	1491.0
12.5°	6177.7	5648.3	4589.5	3526.4	2586.4	1778.3	1235.9	959.4	836.3	788.7	767.1
15°	5976.7	5335.0	4047.1	2813.3	1726.4	1022.0	715.2	624.5	605.0	605.0	602.8
17.5°	5773.6	5032.5	3519.9	2113.2	1086.9	669.8	564.0	551.0	553.1	559.7	559.7
20°	5581.3	4745.1	3012.2	1506.1	713.1	535.9	512.1	507.8	514.2	522.9	520.8
22.5°	5425.7	4492.3	2536.7	1035.0	548.8	486.2	471.1	464.5	468.9	475.4	473.2
25°	5315.6	4276.2	2100.3	721.7	477.5	442.9	425.6	417.1	412.8	417.1	414.9
27.5°	5248.6	4094.7	1689.7	542.4	427.8	399.8	378.2	360.9	350.1	350.1	345.8
30°	5205.3	3923.9	1324.5	449.5	386.8	356.5	326.3	302.5	285.2	280.9	278.8
32.5°	5203.1	3777.0	989.6	397.6	347.9	313.3	276.6	246.3	226.9	222.6	220.4
35°	5257.1	3658.2	728.1	358.6	313.3	272.3	231.2	198.8	181.5	181.5	179.3
37.5°	5397.6	3589.0	551.0	328.5	285.2	237.7	194.5	164.2	149.0	153.4	153.4
40°	5659.1	3576.1	449.5	304.6	261.5	207.5	157.7	134.0	127.5	134.0	134.0
42.5°	6058.8	3645.3	399.8	287.3	239.9	177.2	131.9	114.6	112.3	118.9	118.9
45°	6579.6	3781.3	371.6	272.3	216.0	146.9	110.2	99.4	97.3	105.9	105.9
47.5°	7210.6	3965.1	345.8	255.0	192.3	121.0	92.9	84.3	84.3	92.9	95.0
50°	7958.1	4213.5	319.8	237.7	172.9	101.6	77.7	71.3	73.4	82.1	84.3
52.5°	8818.1	4518.2	296.0	222.6	151.3	82.1	64.9	60.5	62.7	71.3	73.4
55°	9559.3	4783.9	267.9	207.5	123.2	67.0	54.0	51.9	54.0	64.9	64.9
57.5°	10205.4	5039.0	242.0	183.6	97.3	54.0	43.2	43.2	47.6	58.3	60.5
60°	11063.2	5440.9	220.4	155.6	73.4	41.0	34.6	36.7	43.2	51.9	54.0
62.5°	12582.3	6123.7	192.3	129.6	54.0	32.4	28.1	30.3	38.9	49.7	51.9
65°	14483.8	6769.8	159.9	108.0	41.0	23.7	21.6	28.1	38.9	49.7	51.9
67.5°	14289.3	5888.1	125.3	86.4	30.3	19.4	17.3	25.9	36.7	49.7	51.9
70°	11588.3	4127.1	92.9	58.3	23.7	17.3	17.3	25.9	36.7	47.6	49.7
72.5°	8038.1	2296.9	71.3	38.9	21.6	17.3	15.1	23.7	34.6	47.6	49.7
75°	3824.6	704.4	56.2	28.1	19.4	15.1	13.0	23.7	34.6	47.6	49.7
77.5°	734.7	179.3	45.4	23.7	17.3	15.1	13.0	21.6	34.6	45.4	47.6
80°	248.5	80.0	36.7	21.6	17.3	15.1	13.0	21.6	32.4	43.2	45.4
82.5°	136.2	45.4	32.4	19.4	17.3	13.0	10.8	19.4	30.3	43.2	45.4
85°	105.9	32.4	25.9	19.4	17.3	13.0	10.8	19.4	30.3	41.0	43.2
87.5°	54.0	23.7	21.6	19.4	17.3	13.0	10.8	17.3	28.1	38.9	43.2
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)