

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: P196598

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196598  
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-02-D-UNV-SL3-7030-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 1050mA 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: 10000.5 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

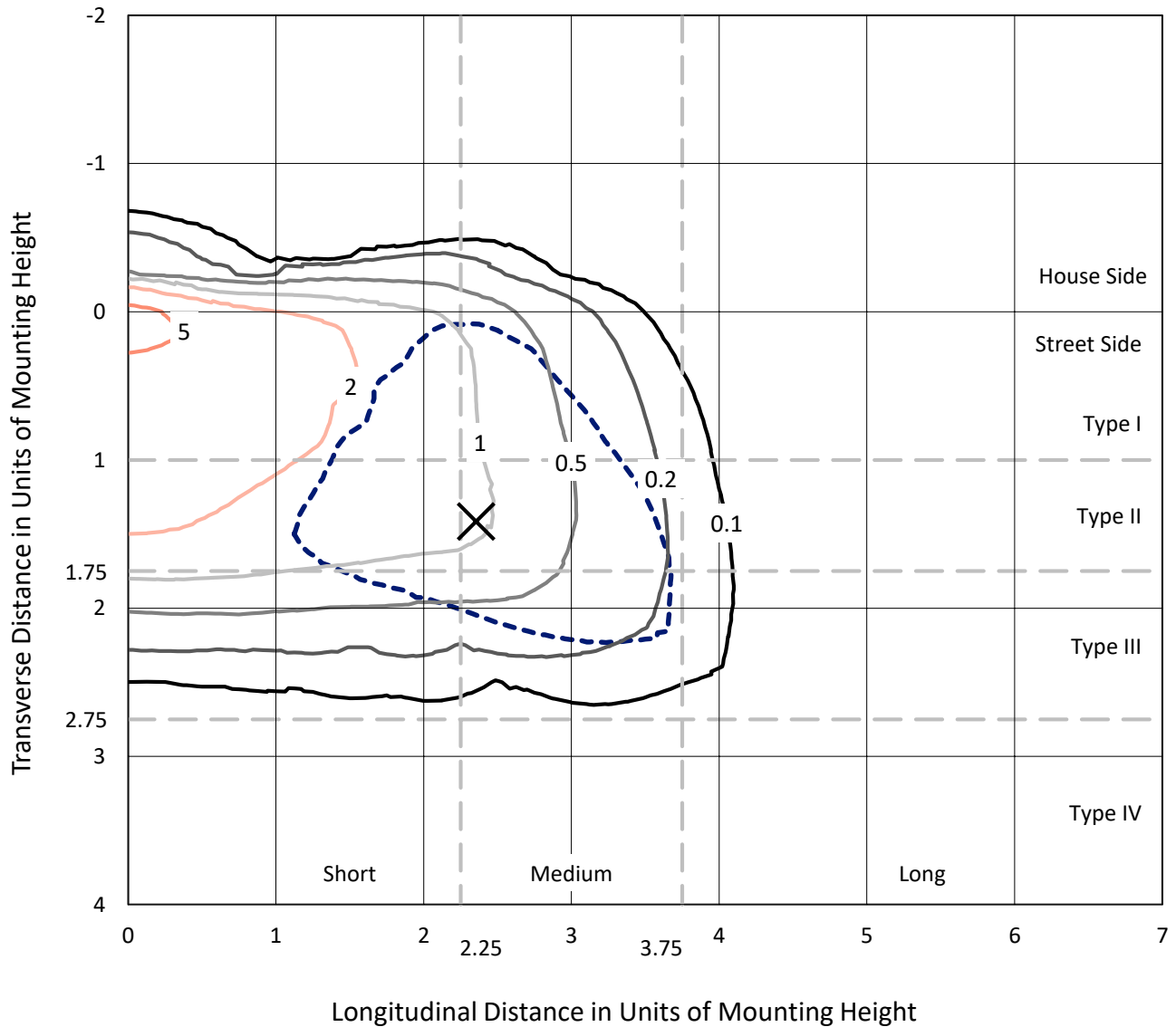
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

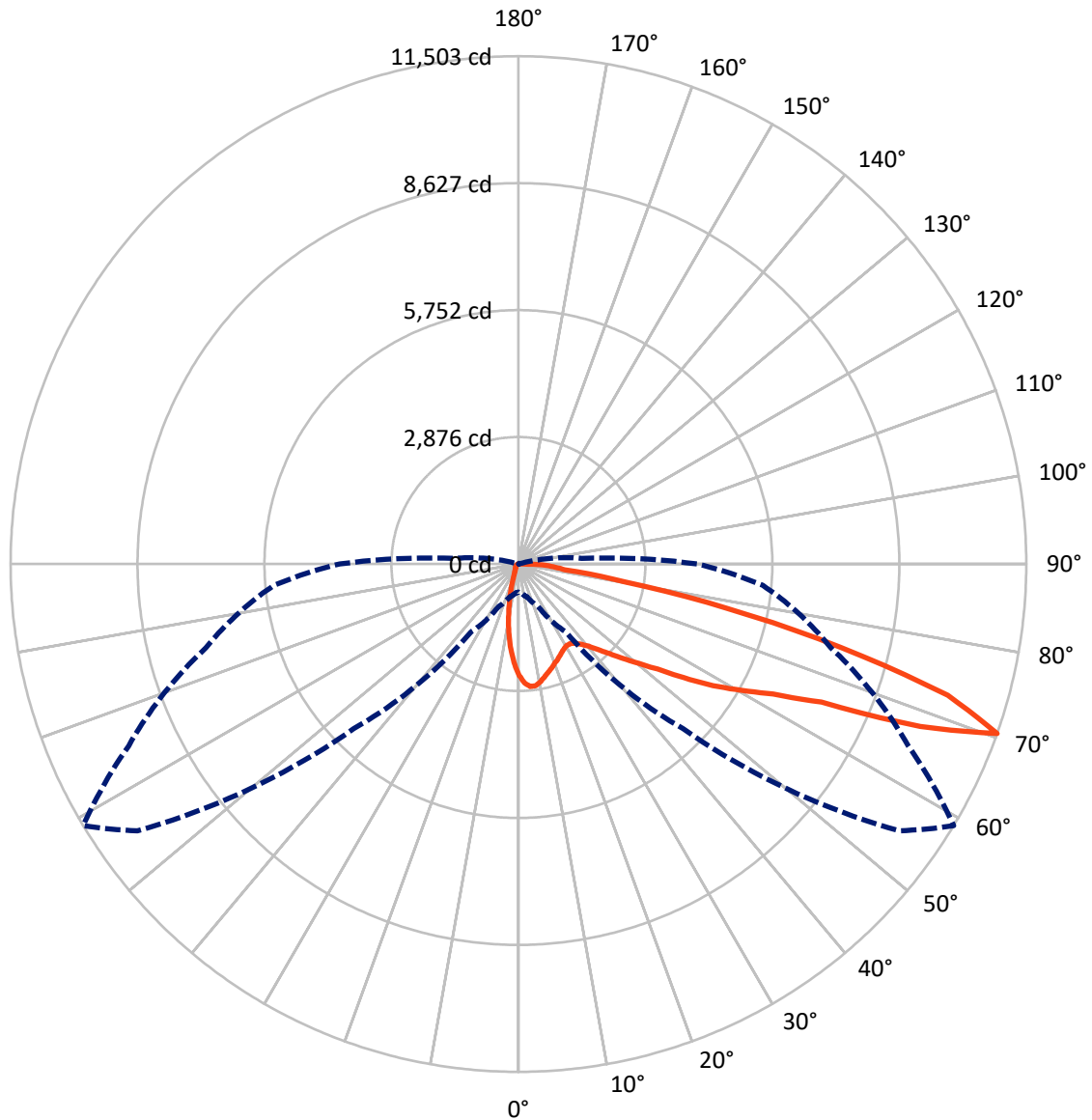
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.7 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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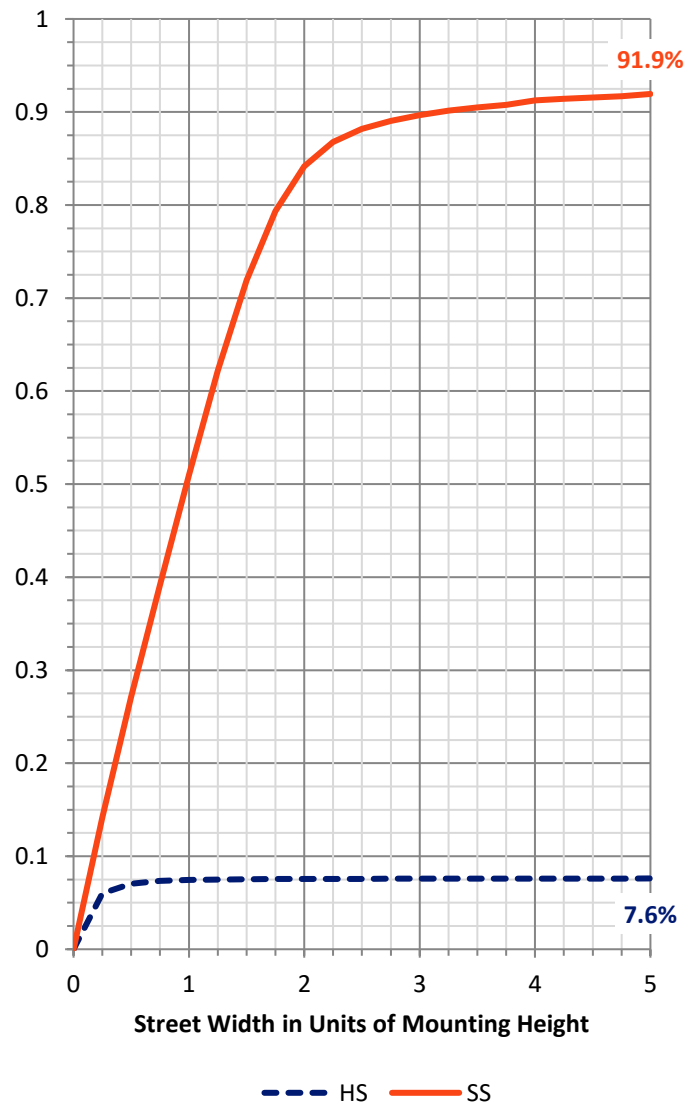
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	768.8	0.0	768.8
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	9231.7	0.0	9231.7
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	10000.5	0.0	10000.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	207.9	2.1
10°-20°	436.1	4.4
20°-30°	590.4	5.9
30°-40°	852.0	8.5
40°-50°	1415.0	14.1
50°-60°	2164.4	21.6
60°-70°	2692.1	26.9
70°-80°	1488.2	14.9
80°-90°	154.3	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°	10000.5	100.0
0°-180°	10000.5	100.0



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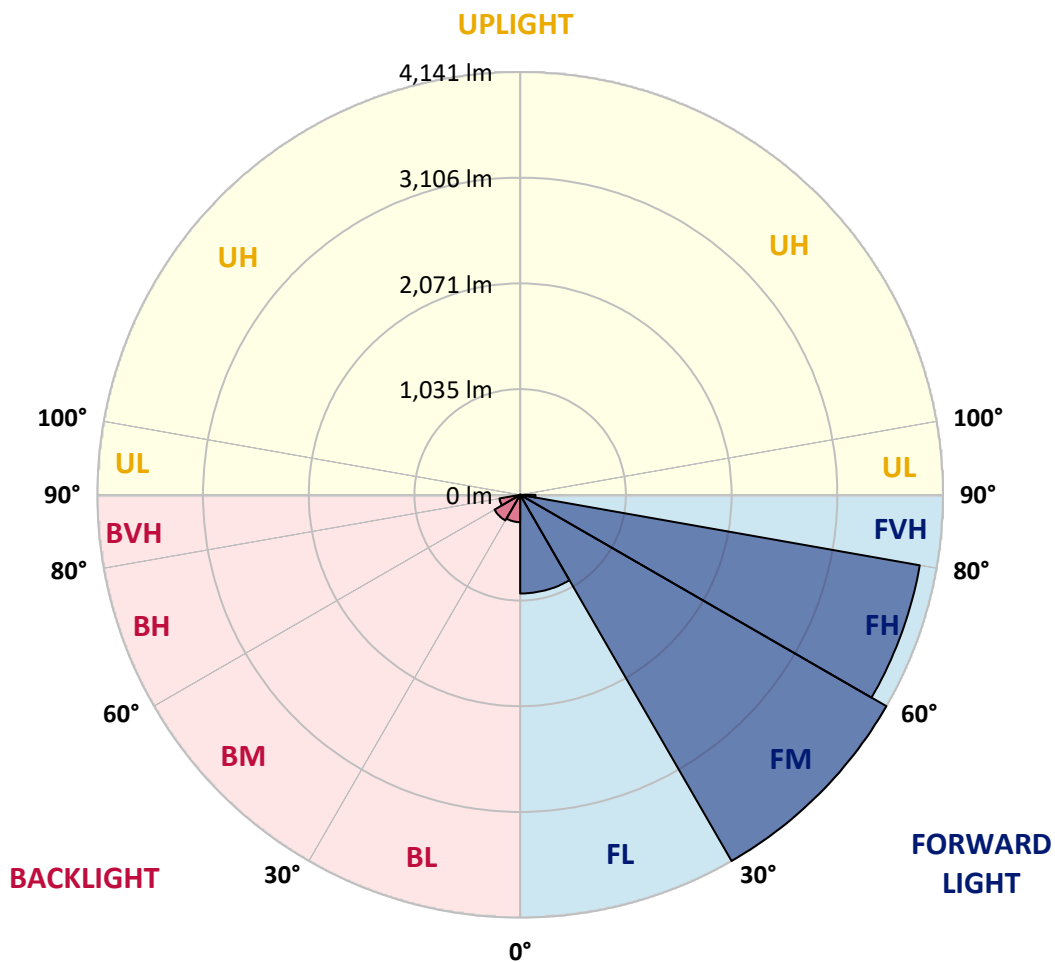
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	966.6	9.7			
FM (30°-60°)	4141.3	41.4			
FH (60°-80°)	3974.0	39.7			G2/5000
FVH (80°-90°)	149.8	1.5			G2/225
BL (0°-30°)	267.9	2.7	B1/500		
BM (30°-60°)	290.2	2.9	B1/1000		
BH (60°-80°)	206.2	2.1	B1/500		G1/500
BVH (80°-90°)	4.5	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-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8
2.5°	2858.4	2854.0	2835.1	2831.2	2810.1	2767.9	2718.9	2699.2	2659.3	2595.9	2525.7
5°	2906.0	2908.3	2909.8	2901.5	2898.4	2863.6	2809.4	2786.0	2732.5	2628.3	2500.1
7.5°	2727.8	2734.0	2752.8	2761.1	2797.4	2810.9	2799.5	2784.5	2742.3	2619.3	2439.0
10°	2540.1	2551.4	2571.8	2585.3	2629.9	2666.0	2712.1	2715.8	2706.8	2589.1	2370.4
12.5°	2378.7	2389.2	2411.8	2439.0	2484.2	2531.0	2599.8	2623.9	2654.0	2569.4	2321.3
15°	2239.9	2242.9	2264.7	2298.7	2358.3	2422.4	2503.9	2539.3	2598.1	2561.9	2283.6
17.5°	2118.3	2119.1	2133.5	2164.4	2236.9	2321.3	2416.4	2463.1	2537.9	2551.4	2250.4
20°	2038.4	2037.6	2038.4	2054.9	2119.1	2219.5	2334.9	2383.9	2479.7	2538.5	2216.5
22.5°	2011.3	2007.4	1990.1	1984.0	2024.8	2113.1	2251.2	2315.3	2427.6	2534.9	2191.5
25°	2044.5	2042.2	2005.2	1970.5	1974.4	2029.4	2165.8	2244.4	2387.0	2548.4	2185.5
27.5°	2151.6	2147.1	2090.4	2022.6	1979.6	1989.4	2102.4	2184.7	2354.5	2581.6	2193.8
30°	2291.9	2292.6	2232.2	2150.0	2048.9	1993.1	2068.6	2146.3	2332.5	2631.4	2212.0
32.5°	2448.1	2447.3	2404.2	2309.2	2180.3	2062.6	2083.7	2149.3	2335.6	2704.5	2246.6
35°	2609.4	2601.1	2586.8	2503.1	2352.3	2184.0	2152.3	2200.6	2367.3	2801.1	2305.5
37.5°	2795.8	2792.7	2807.1	2718.9	2565.0	2362.8	2273.0	2305.5	2447.3	2943.7	2400.5
40°	3092.2	3075.7	3082.5	2962.6	2804.9	2603.4	2442.1	2450.3	2574.8	3132.3	2550.6
42.5°	3657.4	3590.3	3464.3	3239.4	3068.9	2870.5	2663.0	2648.7	2755.1	3361.0	2748.3
45°	4332.5	4255.6	3938.0	3544.9	3333.0	3157.1	2936.2	2897.7	2976.9	3633.2	3003.3
47.5°	4896.1	4813.1	4392.1	3864.1	3601.5	3452.9	3238.7	3193.4	3242.5	3949.2	3309.6
50°	5088.4	5042.5	4672.8	4129.6	3872.3	3784.8	3618.1	3542.7	3554.7	4290.3	3667.2
52.5°	5000.2	4984.4	4736.9	4311.5	4122.8	4151.6	4033.9	3954.6	3941.0	4662.9	4062.5
55°	4813.9	4806.4	4685.6	4412.6	4343.8	4487.2	4617.0	4548.4	4420.1	5059.0	4389.2
57.5°	4547.6	4576.3	4662.9	4607.1	4615.4	4841.9	5158.6	5194.0	5002.4	5374.4	4631.3
60°	3836.2	3913.1	4310.8	4816.1	5203.2	5431.8	5738.8	5805.2	5495.8	5590.1	4911.2
62.5°	2835.9	2945.9	3512.4	4441.2	5526.8	6553.5	6510.5	6481.2	5966.5	5879.1	5420.4
65°	1665.7	1794.7	2273.8	3470.3	5038.7	7274.7	7951.5	7544.1	6684.1	6479.6	6231.4
67.5°	829.9	830.6	1047.1	1831.7	3723.8	6771.6	10054.7	9819.3	8209.4	7364.5	6551.3
70°	638.2	655.5	774.7	1064.5	1883.0	5274.1	10536.8	11503.2	9742.4	7325.3	5558.4
72.5°	541.0	552.2	689.5	926.4	1407.7	2895.4	9121.5	10167.8	9296.6	6189.1	4097.2
75°	389.3	398.4	610.3	840.4	1296.1	1436.4	6257.1	7541.1	6975.2	4353.7	2254.9
77.5°	96.5	95.8	212.7	682.0	1159.6	1196.5	3590.3	4835.7	4002.1	1782.7	579.4
80°	43.0	41.5	48.3	143.3	1078.8	1129.3	1579.1	2442.1	1535.2	289.0	177.3
82.5°	30.1	28.6	30.1	52.8	360.5	1047.9	954.3	1058.4	562.0	98.9	75.4
85°	9.9	9.1	16.6	44.5	101.1	604.3	930.9	790.6	417.9	42.3	50.6
87.5°	1.5	1.5	6.0	24.1	29.4	201.5	546.2	547.7	187.8	24.9	22.6
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°	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8	2528.8
2.5°	2490.3	2445.8	2383.2	2320.5	2264.0	2205.8	2159.1	2137.2	2127.4	2113.8	2084.4
5°	2432.9	2352.3	2214.9	2079.9	1953.9	1833.2	1729.9	1671.0	1607.6	1604.6	1573.7
7.5°	2340.9	2226.2	2009.8	1800.0	1607.6	1423.5	1265.1	1162.5	1092.4	1048.7	1018.4
10°	2238.2	2091.2	1804.5	1509.5	1247.7	1001.8	798.1	665.4	584.6	543.9	520.5
12.5°	2156.9	1972.0	1602.4	1231.3	903.0	620.9	431.6	335.0	291.9	275.4	267.8
15°	2086.7	1862.7	1413.0	982.2	602.8	356.8	249.6	218.0	211.2	211.2	210.5
17.5°	2015.8	1757.0	1228.9	737.8	379.4	233.9	196.8	192.4	193.2	195.3	195.3
20°	1948.6	1656.7	1051.6	525.9	249.0	187.1	178.7	177.3	179.5	182.6	181.8
22.5°	1894.3	1568.4	885.6	361.3	191.6	169.8	164.4	162.2	163.7	166.0	165.2
25°	1855.9	1492.9	733.2	252.0	166.7	154.6	148.6	145.7	144.1	145.7	144.9
27.5°	1832.5	1429.5	589.9	189.3	149.3	139.6	131.9	125.9	122.3	122.3	120.7
30°	1817.3	1370.0	462.5	156.9	135.1	124.4	113.9	105.7	99.5	98.2	97.4
32.5°	1816.7	1318.6	345.5	138.8	121.5	109.4	96.5	86.0	79.2	77.7	76.9
35°	1835.4	1277.2	254.2	125.2	109.4	95.0	80.8	69.4	63.4	63.4	62.6
37.5°	1884.5	1253.1	192.4	114.7	99.5	83.0	67.8	57.4	52.0	53.5	53.5
40°	1975.7	1248.5	156.9	106.4	91.2	72.4	55.0	46.8	44.5	46.8	46.8
42.5°	2115.4	1272.7	139.6	100.3	83.7	61.8	46.0	40.0	39.3	41.5	41.5
45°	2297.1	1320.2	129.8	95.0	75.4	51.4	38.5	34.8	34.0	36.9	36.9
47.5°	2517.5	1384.4	120.7	89.0	67.2	42.3	32.4	29.4	29.4	32.4	33.3
50°	2778.5	1471.0	111.7	83.0	60.3	35.5	27.2	24.9	25.6	28.6	29.4
52.5°	3078.7	1577.4	103.4	77.7	52.8	28.6	22.6	21.1	21.9	24.9	25.6
55°	3337.6	1670.2	93.5	72.4	43.0	23.4	18.9	18.1	18.9	22.6	22.6
57.5°	3563.1	1759.3	84.4	64.1	34.0	18.9	15.1	15.1	16.6	20.3	21.1
60°	3862.6	1899.6	76.9	54.3	25.6	14.3	12.0	12.8	15.1	18.1	18.9
62.5°	4392.9	2137.9	67.2	45.3	18.9	11.4	9.9	10.6	13.5	17.4	18.1
65°	5056.7	2363.6	55.8	37.7	14.3	8.3	7.5	9.9	13.5	17.4	18.1
67.5°	4988.9	2055.7	43.7	30.1	10.6	6.8	6.0	9.1	12.8	17.4	18.1
70°	4045.9	1440.9	32.4	20.3	8.3	6.0	6.0	9.1	12.8	16.6	17.4
72.5°	2806.5	802.0	24.9	13.5	7.5	6.0	5.3	8.3	12.0	16.6	17.4
75°	1335.2	246.0	19.6	9.9	6.8	5.3	4.5	8.3	12.0	16.6	17.4
77.5°	256.5	62.6	15.9	8.3	6.0	5.3	4.5	7.5	12.0	15.9	16.6
80°	86.8	27.9	12.8	7.5	6.0	5.3	4.5	7.5	11.4	15.1	15.9
82.5°	47.5	15.9	11.4	6.8	6.0	4.5	3.9	6.8	10.6	15.1	15.9
85°	36.9	11.4	9.1	6.8	6.0	4.5	3.9	6.8	10.6	14.3	15.1
87.5°	18.9	8.3	7.5	6.8	6.0	4.5	3.9	6.0	9.9	13.5	15.1
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)