

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: P270335

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7027-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270335  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
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-AFL-7027-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5852.5 lumens  
Efficiency: N/A  
Efficacy: 88.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 66  
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

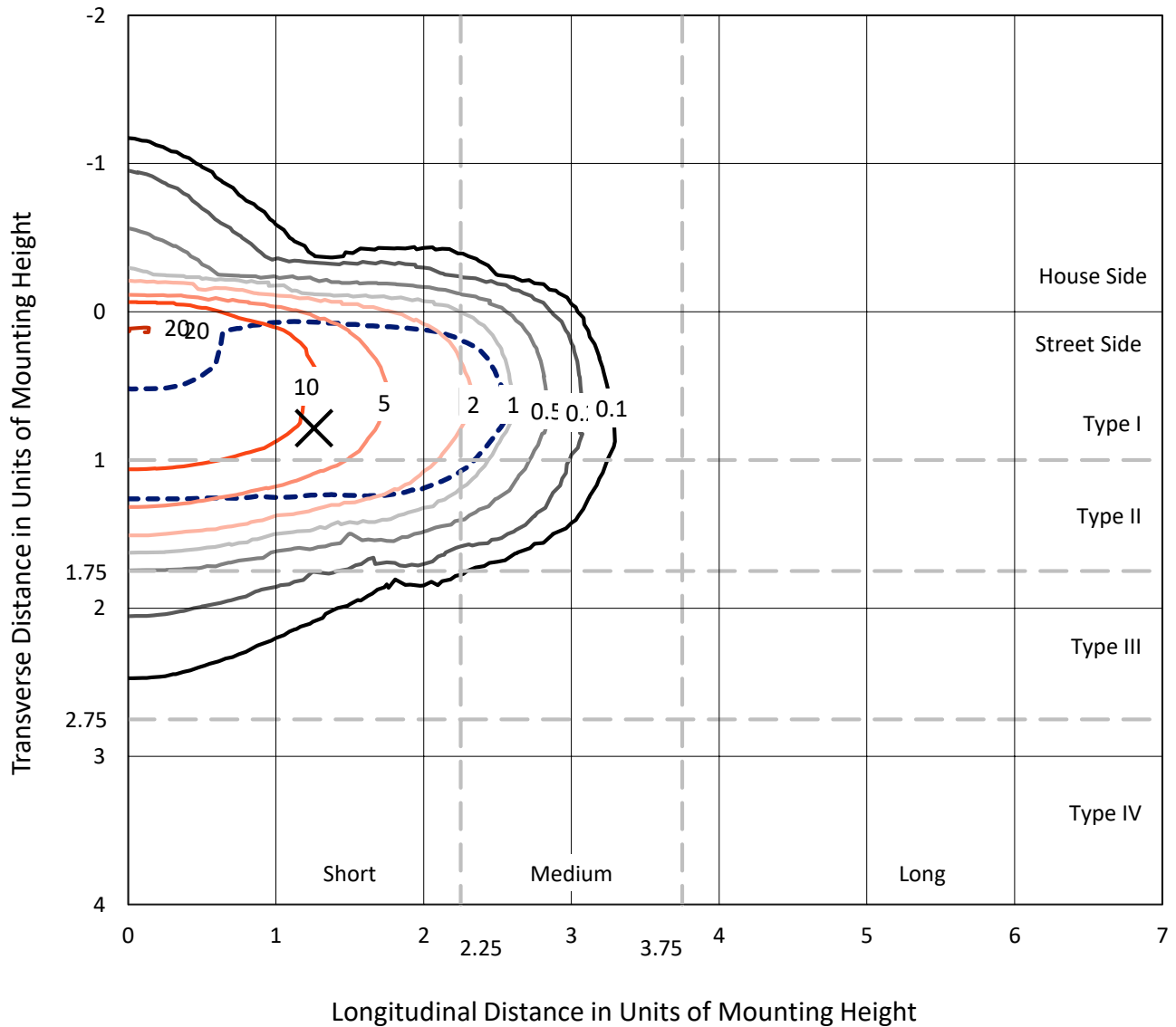


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

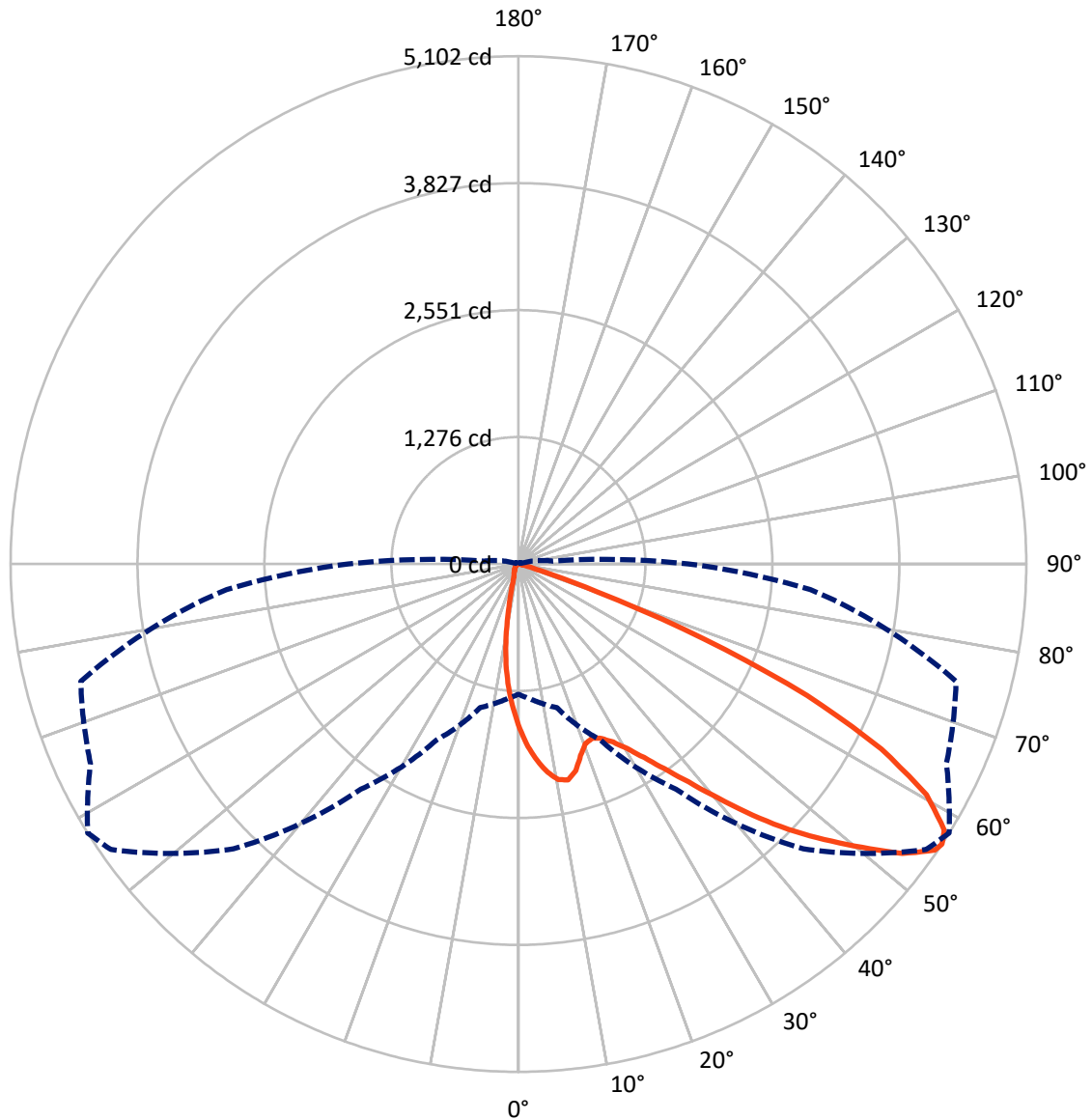


Based on 10 foot mounting height. Maximum calculated value = 20.6 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 56-Deg Vertical

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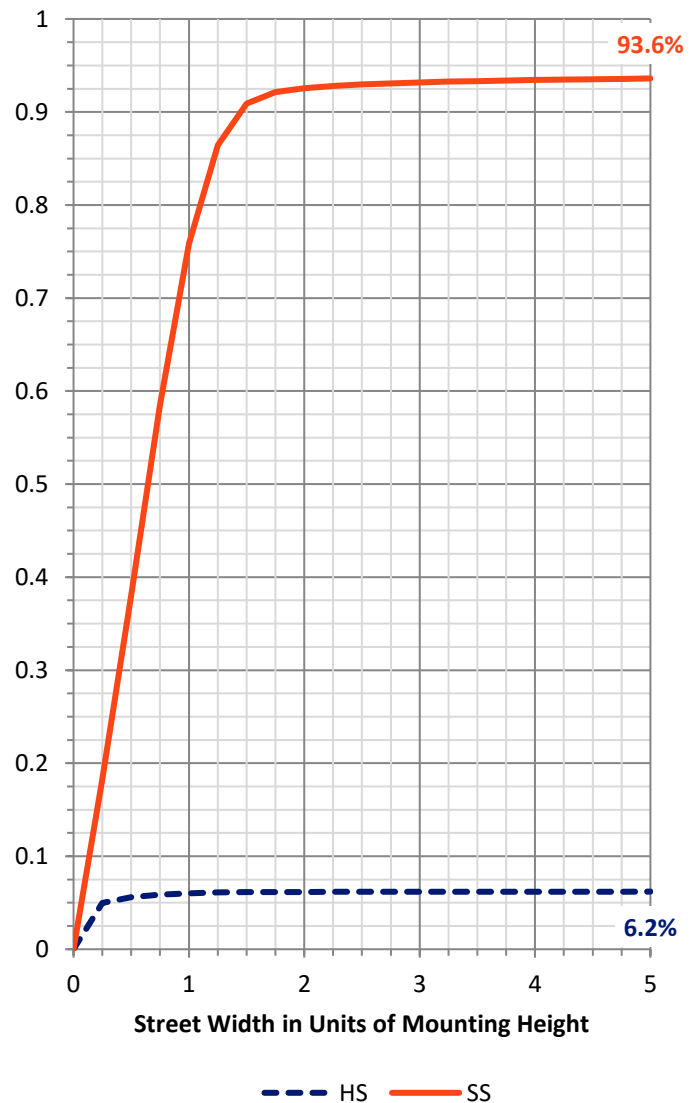
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	365.3	0.0	365.3
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	5487.2	0.0	5487.2
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	5852.5	0.0	5852.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.4	2.4
10°-20°	328.9	5.6
20°-30°	553.4	9.5
30°-40°	947.7	16.2
40°-50°	1430.1	24.4
50°-60°	1486.6	25.4
60°-70°	834.5	14.3
70°-80°	114.4	2.0
80°-90°	15.5	0.3
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°	5852.5	100.0
0°-180°	5852.5	100.0

**Coefficient of Utilization**



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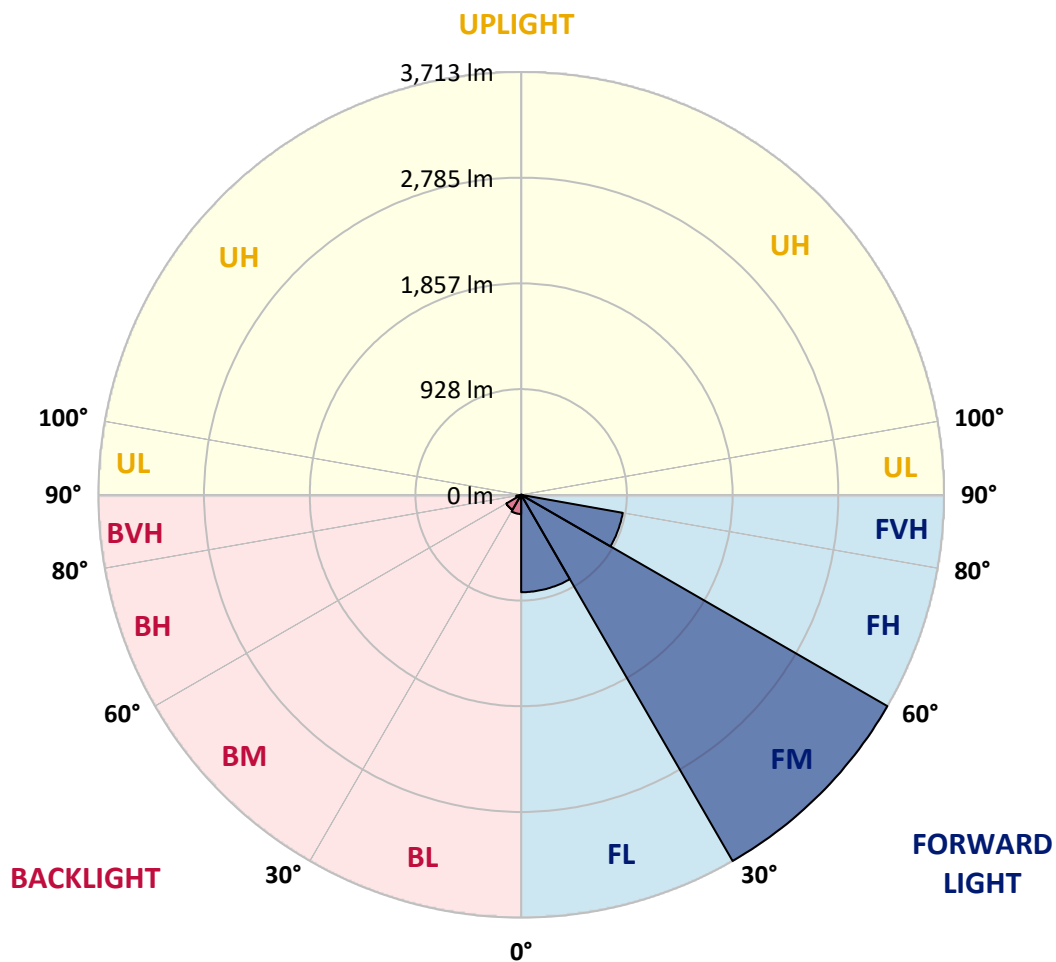
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	855.2	14.6			
FM	(30°-60°)	3713.1	63.4			
FH	(60°-80°)	905.6	15.5			G1/1800
FVH	(80°-90°)	13.3	0.2			G1/100
BL	(0°-30°)	168.5	2.9	B1/500		
BM	(30°-60°)	151.3	2.6	B0/220		
BH	(60°-80°)	43.3	0.7	B0/110		G0/110
BVH	(80°-90°)	2.1	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-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1
2.5°	1993.7	1981.8	1969.2	1946.0	1924.4	1891.6	1845.8	1834.8	1799.0	1740.0	1685.2
5°	2165.6	2163.4	2154.9	2136.2	2113.0	2072.7	2021.4	1987.1	1931.6	1838.8	1732.9
7.5°	2063.9	2082.6	2113.4	2157.1	2186.7	2182.6	2143.3	2113.4	2058.5	1931.6	1779.8
10°	1739.7	1743.3	1785.7	1877.5	2023.3	2158.9	2210.3	2202.3	2151.8	2012.9	1821.0
12.5°	1625.4	1627.5	1637.4	1666.8	1761.5	1950.8	2183.5	2225.6	2221.5	2090.6	1864.7
15°	1634.2	1635.6	1638.2	1647.8	1674.4	1769.7	2047.7	2154.4	2266.2	2164.2	1907.6
17.5°	1704.9	1703.9	1695.5	1686.5	1695.0	1726.3	1909.3	2021.8	2256.7	2226.4	1942.9
20°	1842.3	1846.8	1818.2	1778.6	1758.0	1759.3	1840.9	1925.3	2204.0	2274.6	1969.2
22.5°	2035.6	2038.9	1991.9	1923.2	1862.8	1832.5	1855.3	1899.9	2143.3	2319.2	1990.6
25°	2266.6	2266.6	2200.8	2103.1	2009.8	1943.3	1923.6	1940.6	2120.1	2369.6	2012.1
27.5°	2515.8	2524.6	2438.9	2310.7	2187.6	2090.1	2028.6	2025.4	2138.0	2433.1	2036.2
30°	2786.7	2794.7	2692.9	2536.3	2390.2	2265.6	2170.9	2150.5	2206.2	2518.4	2071.4
32.5°	3056.5	3063.1	2950.7	2790.8	2620.6	2474.2	2349.5	2317.0	2329.0	2643.0	2123.2
35°	3399.4	3400.8	3258.2	3068.0	2886.3	2714.4	2556.8	2524.6	2511.2	2800.1	2197.8
37.5°	3672.2	3661.5	3571.3	3391.3	3182.9	3003.4	2818.1	2776.0	2743.9	3021.2	2313.4
40°	3736.5	3736.5	3723.0	3669.0	3503.4	3330.6	3151.2	3088.6	3017.5	3281.5	2468.8
42.5°	3569.1	3579.7	3668.1	3785.5	3787.0	3676.3	3500.8	3448.1	3323.0	3577.9	2638.5
45°	3194.5	3197.5	3409.6	3726.7	3941.9	4005.4	3875.7	3803.1	3629.8	3886.1	2793.9
47.5°	3059.5	3069.4	3159.6	3547.1	3953.5	4271.9	4235.7	4135.6	3913.7	4167.3	2939.1
50°	2852.4	2864.4	2974.7	3282.9	3849.0	4442.8	4580.0	4472.8	4172.3	4401.9	3010.8
52.5°	2356.8	2375.5	2531.3	2933.1	3587.8	4450.1	4895.3	4830.9	4437.1	4527.3	3002.4
55°	1621.8	1635.6	1817.4	2289.8	3061.0	4231.6	5031.0	5075.2	4673.3	4555.5	2961.4
56°	1308.3	1360.2	1493.2	1950.8	2760.9	4046.0	4999.6	5102.0	4743.4	4551.0	2943.4
57.5°	864.9	874.7	1019.8	1413.8	2216.9	3642.7	4858.7	5044.8	4833.6	4528.1	2930.5
60°	406.8	411.2	463.4	652.3	1199.7	2654.6	4400.0	4709.1	4866.7	4480.3	2930.1
62.5°	265.2	266.1	272.4	311.3	490.7	1445.8	3647.7	4092.4	4592.9	4475.0	2921.6
65°	218.4	220.5	213.0	217.8	256.7	545.2	2572.8	3190.4	3950.3	4349.1	2826.1
67.5°	192.4	192.9	182.6	176.8	187.9	239.4	1296.3	2012.5	2954.6	3695.4	2327.7
70°	175.4	175.0	163.4	150.0	150.5	159.0	422.5	836.0	1634.7	2194.2	1336.5
72.5°	155.9	156.8	150.0	131.3	125.0	112.5	159.0	225.5	556.4	704.6	352.3
75°	136.6	134.8	128.2	116.2	104.6	75.5	79.9	95.9	145.2	143.8	75.8
77.5°	103.6	101.8	104.9	99.2	81.7	52.7	43.7	50.0	65.7	61.2	30.8
80°	79.1	78.2	71.4	84.8	74.6	39.7	30.0	30.8	35.8	32.6	15.2
82.5°	57.1	56.8	54.0	52.2	47.3	29.0	22.7	24.2	26.8	22.7	11.1
85°	21.9	21.9	42.4	35.8	32.6	19.7	16.1	17.3	20.5	16.4	7.5
87.5°	3.6	3.6	28.6	23.6	14.7	9.8	10.3	11.1	12.0	9.8	5.7
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°	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1	1657.1
2.5°	1652.6	1622.7	1557.0	1493.6	1438.2	1377.6	1346.6	1310.9	1297.6	1270.8	1273.4
5°	1669.5	1607.1	1475.2	1336.5	1209.2	1079.8	987.6	901.1	852.9	805.2	805.2
7.5°	1686.9	1591.3	1387.8	1165.9	951.6	729.7	572.4	446.5	376.4	329.6	328.2
10°	1699.1	1571.3	1288.2	968.1	651.9	376.0	226.8	178.7	161.2	153.6	153.2
12.5°	1714.7	1551.3	1174.9	735.0	362.1	178.7	141.6	133.9	130.9	129.0	129.0
15°	1728.0	1522.6	1037.3	494.2	190.3	133.9	121.9	119.3	118.8	118.3	118.8
17.5°	1731.2	1482.1	872.6	289.3	138.0	117.0	111.6	109.5	109.5	109.0	109.0
20°	1723.9	1428.5	690.3	178.7	119.3	107.5	101.8	99.2	98.6	98.6	98.6
22.5°	1709.2	1360.2	510.3	135.3	108.5	99.2	91.5	88.8	88.8	89.3	89.7
25°	1691.0	1279.2	350.5	116.5	100.5	90.2	82.6	79.9	80.8	81.7	82.1
27.5°	1667.8	1182.9	229.4	100.9	89.7	81.2	74.6	72.9	74.6	76.4	77.3
30°	1644.5	1077.0	155.3	87.6	77.8	71.4	67.5	67.0	69.7	73.8	74.1
32.5°	1629.3	968.6	117.5	78.6	68.4	62.9	61.2	62.1	66.0	70.5	71.4
35°	1628.0	862.7	100.0	71.4	62.1	57.1	56.2	59.0	63.4	67.0	67.9
37.5°	1649.0	763.6	90.6	66.0	57.1	52.2	50.9	55.9	59.8	63.4	64.3
40°	1691.4	674.6	84.4	61.2	53.1	47.3	46.4	50.5	54.4	58.5	59.8
42.5°	1744.6	591.7	77.3	56.2	48.7	42.0	41.1	44.1	48.1	54.0	54.9
45°	1790.5	514.4	69.7	50.9	43.7	36.2	35.8	39.3	42.4	47.8	48.7
47.5°	1829.4	450.1	62.5	45.0	37.5	32.2	31.7	33.4	35.3	40.2	41.1
50°	1808.8	395.7	55.3	37.1	30.4	27.7	27.3	27.3	29.5	34.3	35.3
52.5°	1758.4	361.7	48.7	30.8	25.1	23.6	22.3	22.7	25.1	27.3	27.7
55°	1717.7	345.6	42.8	27.3	21.0	19.7	18.3	17.8	18.3	17.3	16.4
56°	1707.9	343.8	41.5	26.3	20.1	18.3	16.4	15.6	15.2	13.4	12.9
57.5°	1703.5	343.8	39.3	24.6	18.8	16.4	14.4	12.4	10.7	9.4	9.4
60°	1700.0	346.0	36.7	21.4	16.1	13.4	10.3	7.5	6.3	6.3	6.3
62.5°	1692.2	345.2	33.4	17.8	13.8	10.3	6.3	4.9	4.4	4.9	5.4
65°	1607.1	320.6	29.5	14.4	10.7	7.1	3.6	3.6	4.0	4.9	5.4
67.5°	1294.8	242.9	24.2	11.1	7.5	5.4	3.1	3.1	4.0	4.9	5.4
70°	711.3	128.2	20.5	8.1	5.7	4.4	3.1	2.6	4.0	4.9	5.4
72.5°	173.7	53.5	18.8	6.3	5.4	4.0	2.6	2.6	4.0	4.9	5.4
75°	42.8	40.2	15.2	4.9	4.4	3.6	2.6	2.6	4.0	4.9	5.4
77.5°	20.1	53.1	10.3	4.4	4.0	3.1	2.6	2.6	4.0	4.9	4.9
80°	12.0	40.2	6.3	4.0	3.6	3.1	2.6	2.6	4.0	4.9	5.4
82.5°	7.1	11.6	4.4	4.0	3.6	2.6	2.6	2.6	4.0	4.9	5.4
85°	6.3	5.7	4.4	4.0	3.6	3.1	2.6	2.6	4.4	5.4	5.4
87.5°	4.9	4.4	4.0	3.6	3.6	3.1	2.6	2.6	4.0	4.9	5.4
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)