

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: P197072

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-8030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197072  
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-SL3-8030-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 3000K, 800mA 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: 6817 lumens  
Efficiency: N/A  
Efficacy: 80.2 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): 85  
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

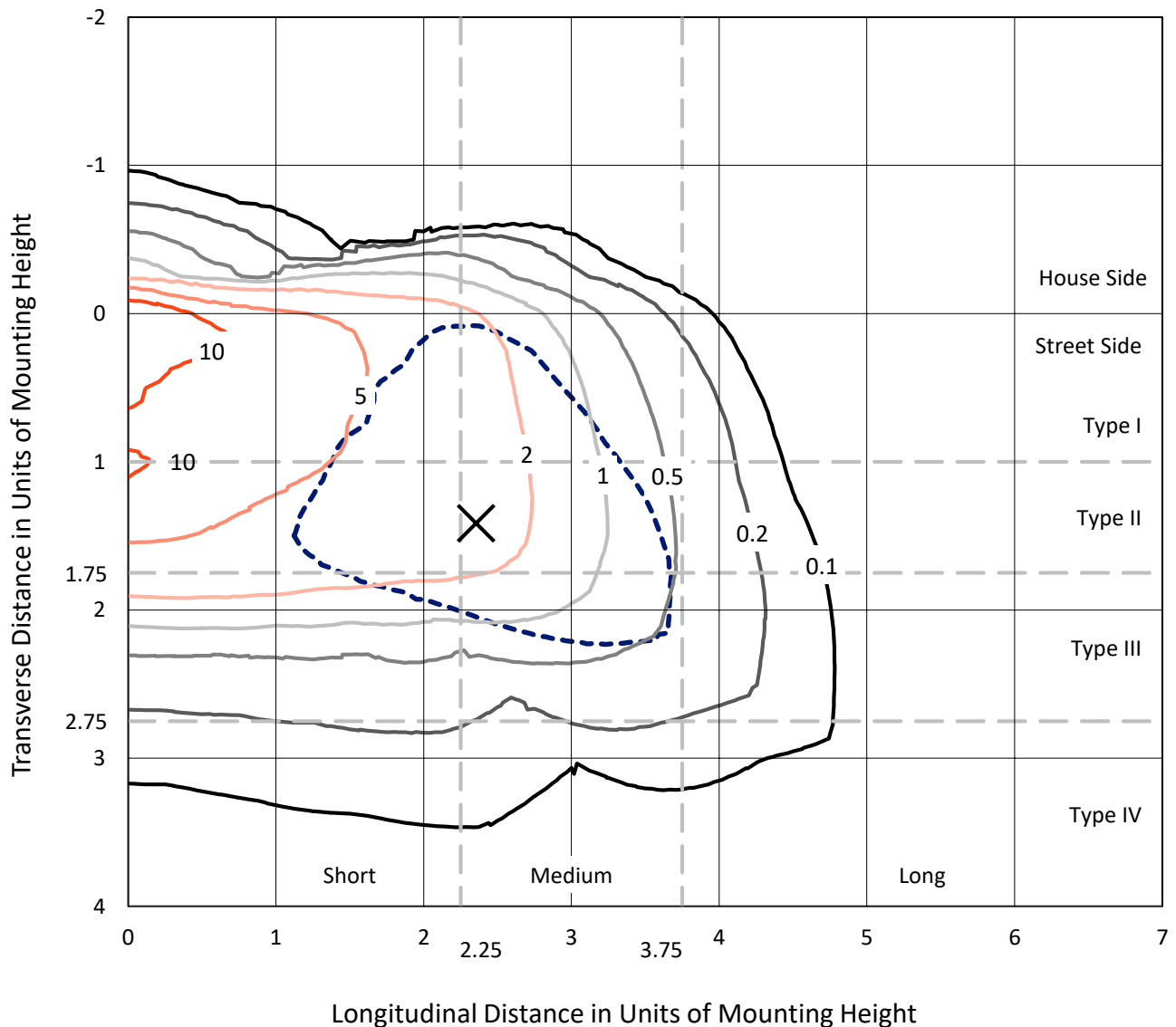


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### Iso-Footcandle Lines of Horizontal Illumination

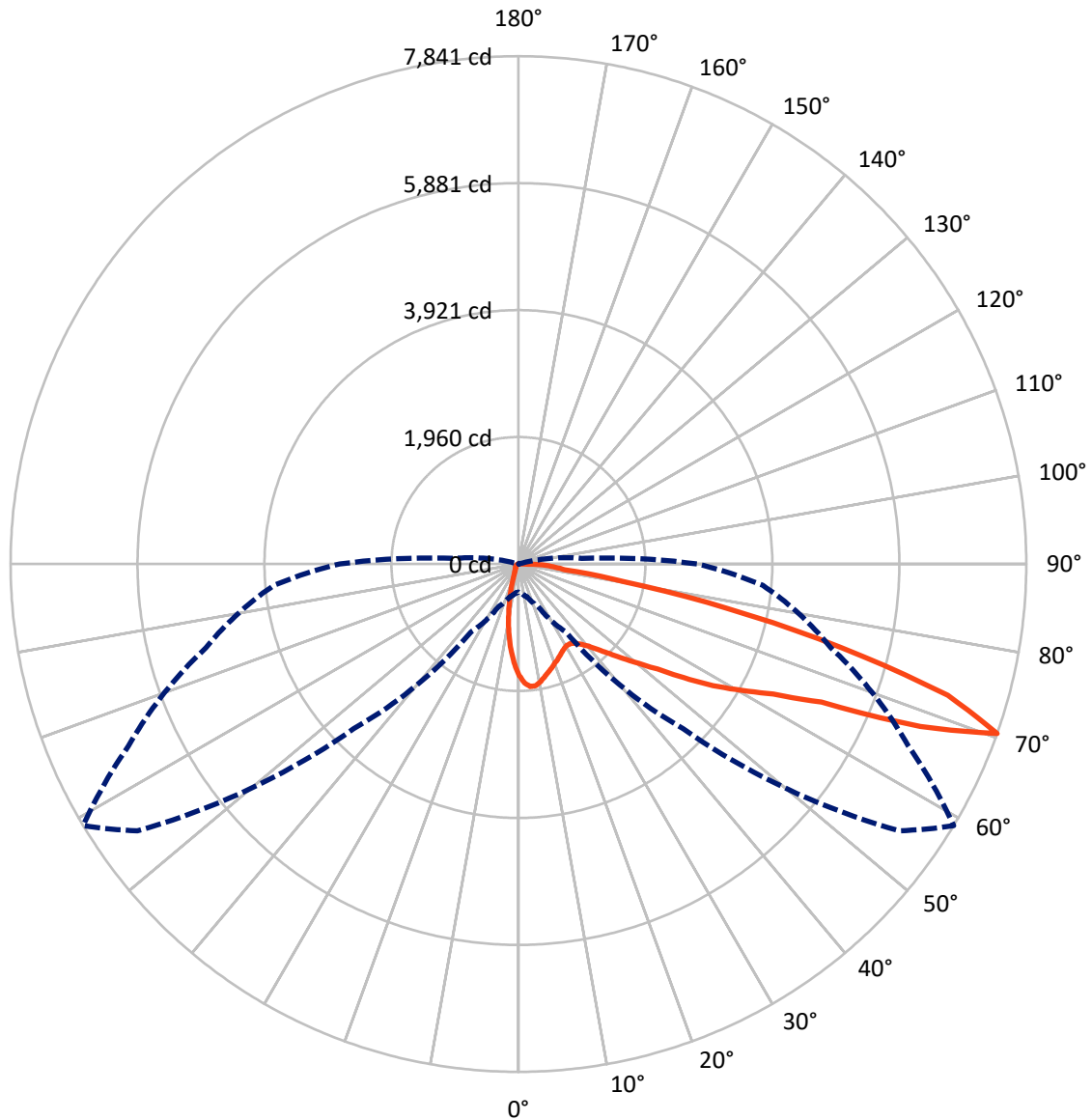
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.3 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	524.0	0.0	524.0
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	6293.0	0.0	6293.0
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	6817.0	0.0	6817.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.7	2.1
10°-20°	297.3	4.4
20°-30°	402.5	5.9
30°-40°	580.8	8.5
40°-50°	964.6	14.1
50°-60°	1475.4	21.6
60°-70°	1835.1	26.9
70°-80°	1014.4	14.9
80°-90°	105.2	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°	6817.0	100.0
0°-180°	6817.0	100.0



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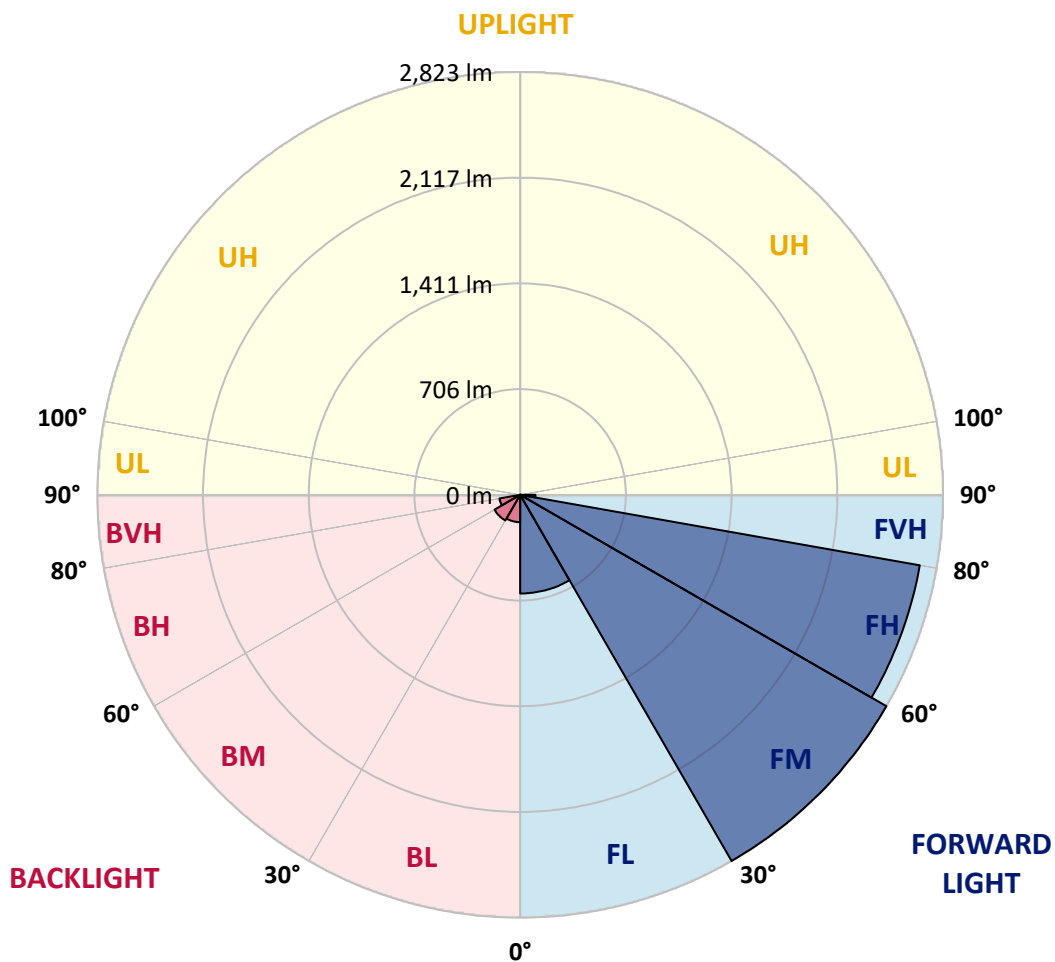
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	658.9	9.7			
FM (30°-60°)	2823.0	41.4			
FH (60°-80°)	2708.9	39.7			G2/5000
FVH (80°-90°)	102.1	1.5			G2/225
BL (0°-30°)	182.6	2.7	B1/500		
BM (30°-60°)	197.8	2.9	B0/220		
BH (60°-80°)	140.6	2.1	B1/500		G1/500
BVH (80°-90°)	3.0	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°	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8
2.5°	1948.5	1945.4	1932.6	1930.0	1915.6	1886.8	1853.4	1840.0	1812.7	1769.5	1721.7
5°	1980.9	1982.4	1983.5	1977.8	1975.8	1952.1	1915.1	1899.1	1862.6	1791.7	1704.2
7.5°	1859.5	1863.7	1876.5	1882.2	1906.8	1916.1	1908.4	1898.1	1869.3	1785.5	1662.6
10°	1731.5	1739.2	1753.1	1762.3	1792.7	1817.4	1848.7	1851.3	1845.1	1764.9	1615.8
12.5°	1621.4	1628.6	1644.1	1662.6	1693.4	1725.3	1772.1	1788.6	1809.1	1751.5	1582.4
15°	1526.8	1528.9	1543.8	1566.9	1607.6	1651.3	1706.8	1731.0	1771.1	1746.4	1556.6
17.5°	1444.0	1444.5	1454.3	1475.4	1524.8	1582.4	1647.2	1679.0	1729.9	1739.2	1534.0
20°	1389.5	1389.0	1389.5	1400.8	1444.5	1512.9	1591.6	1625.0	1690.3	1730.5	1510.9
22.5°	1371.0	1368.4	1356.6	1352.5	1380.3	1440.4	1534.5	1578.2	1654.9	1727.9	1493.9
25°	1393.6	1392.1	1366.9	1343.2	1345.8	1383.3	1476.4	1529.9	1627.1	1737.1	1489.8
27.5°	1466.6	1463.6	1425.0	1378.7	1349.4	1356.1	1433.2	1489.3	1605.0	1759.8	1495.4
30°	1562.3	1562.8	1521.7	1465.6	1396.7	1358.7	1410.1	1463.0	1590.1	1793.7	1507.8
32.5°	1668.7	1668.2	1638.9	1574.1	1486.2	1406.0	1420.4	1465.1	1592.1	1843.6	1531.4
35°	1778.8	1773.1	1763.4	1706.3	1603.4	1488.8	1467.2	1500.1	1613.7	1909.4	1571.6
37.5°	1905.8	1903.8	1913.5	1853.4	1748.5	1610.6	1549.4	1571.6	1668.2	2006.6	1636.4
40°	2107.9	2096.6	2101.2	2019.5	1912.0	1774.7	1664.6	1670.3	1755.1	2135.2	1738.7
42.5°	2493.1	2447.3	2361.4	2208.2	2092.0	1956.7	1815.3	1805.5	1878.0	2291.0	1873.4
45°	2953.4	2900.9	2684.4	2416.5	2272.0	2152.1	2001.5	1975.2	2029.2	2476.6	2047.2
47.5°	3337.5	3280.9	2994.0	2634.0	2455.0	2353.7	2207.7	2176.8	2210.3	2692.1	2256.0
50°	3468.6	3437.3	3185.3	2815.0	2639.7	2580.0	2466.4	2414.9	2423.2	2924.6	2499.8
52.5°	3408.5	3397.7	3229.0	2939.0	2810.4	2829.9	2749.7	2695.7	2686.5	3178.6	2769.2
55°	3281.4	3276.3	3194.0	3007.9	2961.1	3058.8	3147.2	3100.4	3013.0	3448.6	2991.9
57.5°	3099.9	3119.5	3178.6	3140.5	3146.2	3300.5	3516.5	3540.6	3410.0	3663.5	3157.0
60°	2615.0	2667.4	2938.4	3283.0	3546.8	3702.6	3911.9	3957.2	3746.3	3810.6	3347.8
62.5°	1933.1	2008.2	2394.4	3027.4	3767.4	4467.3	4438.0	4417.9	4067.2	4007.6	3694.9
65°	1135.5	1223.4	1550.0	2365.6	3434.7	4958.9	5420.2	5142.5	4556.3	4416.9	4247.7
67.5°	565.7	566.2	713.8	1248.6	2538.3	4615.9	6854.0	6693.5	5596.1	5020.1	4465.8
70°	435.1	446.9	528.1	725.6	1283.6	3595.1	7182.6	7841.3	6641.1	4993.4	3789.0
72.5°	368.7	376.4	470.0	631.5	959.6	1973.7	6217.8	6931.1	6337.1	4218.9	2792.9
75°	265.4	271.5	416.0	572.9	883.5	979.1	4265.2	5140.5	4754.8	2967.8	1537.1
77.5°	65.8	65.3	145.0	464.9	790.4	815.6	2447.3	3296.4	2728.1	1215.2	394.9
80°	29.3	28.3	32.9	97.7	735.4	769.8	1076.3	1664.6	1046.5	197.0	120.8
82.5°	20.6	19.5	20.6	36.0	245.8	714.3	650.5	721.5	383.1	67.4	51.4
85°	6.7	6.2	11.3	30.3	68.9	411.9	634.6	538.9	284.9	28.8	34.5
87.5°	1.0	1.0	4.1	16.5	20.1	137.3	372.3	373.3	128.0	17.0	15.4
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°	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8	1723.8
2.5°	1697.5	1667.2	1624.5	1581.8	1543.3	1503.7	1471.8	1456.9	1450.2	1440.9	1420.9
5°	1658.5	1603.4	1509.8	1417.8	1331.9	1249.6	1179.2	1139.1	1095.9	1093.8	1072.7
7.5°	1595.7	1517.6	1370.0	1227.0	1095.9	970.4	862.4	792.5	744.6	714.8	694.2
10°	1525.8	1425.5	1230.1	1029.0	850.6	682.9	544.1	453.6	398.5	370.8	354.8
12.5°	1470.2	1344.3	1092.3	839.3	615.6	423.2	294.2	228.3	199.0	187.7	182.6
15°	1422.4	1269.7	963.2	669.6	410.9	243.2	170.2	148.6	144.0	144.0	143.5
17.5°	1374.1	1197.7	837.7	502.9	258.7	159.4	134.2	131.1	131.6	133.2	133.2
20°	1328.3	1129.3	716.9	358.4	169.7	127.5	121.9	120.8	122.4	124.4	123.9
22.5°	1291.3	1069.1	603.7	246.3	130.6	115.7	112.1	110.6	111.6	113.1	112.6
25°	1265.1	1017.7	499.9	171.8	113.6	105.4	101.3	99.3	98.2	99.3	98.7
27.5°	1249.1	974.5	402.1	129.1	101.8	95.1	90.0	85.9	83.3	83.3	82.3
30°	1238.8	933.9	315.2	107.0	92.1	84.9	77.7	72.0	67.9	66.9	66.3
32.5°	1238.3	898.9	235.5	94.6	82.8	74.6	65.8	58.6	54.0	53.0	52.5
35°	1251.2	870.6	173.3	85.4	74.6	64.8	55.0	47.3	43.2	43.2	42.7
37.5°	1284.6	854.2	131.1	78.2	67.9	56.6	46.3	39.1	35.5	36.5	36.5
40°	1346.8	851.1	107.0	72.5	62.2	49.4	37.5	31.9	30.3	31.9	31.9
42.5°	1442.0	867.5	95.1	68.4	57.1	42.2	31.4	27.3	26.7	28.3	28.3
45°	1565.9	899.9	88.5	64.8	51.4	35.0	26.2	23.7	23.1	25.2	25.2
47.5°	1716.1	943.7	82.3	60.7	45.8	28.8	22.1	20.1	20.1	22.1	22.6
50°	1894.0	1002.8	76.1	56.6	41.1	24.2	18.5	17.0	17.5	19.5	20.1
52.5°	2098.7	1075.3	70.5	53.0	36.0	19.5	15.4	14.4	14.9	17.0	17.5
55°	2275.1	1138.6	63.8	49.4	29.3	15.9	12.9	12.3	12.9	15.4	15.4
57.5°	2428.8	1199.2	57.6	43.7	23.1	12.9	10.3	10.3	11.3	13.9	14.4
60°	2633.0	1294.9	52.5	37.0	17.5	9.8	8.2	8.7	10.3	12.3	12.9
62.5°	2994.5	1457.4	45.8	30.9	12.9	7.7	6.7	7.2	9.3	11.8	12.3
65°	3447.0	1611.2	38.1	25.7	9.8	5.7	5.1	6.7	9.3	11.8	12.3
67.5°	3400.8	1401.3	29.8	20.6	7.2	4.6	4.1	6.2	8.7	11.8	12.3
70°	2757.9	982.2	22.1	13.9	5.7	4.1	4.1	6.2	8.7	11.3	11.8
72.5°	1913.0	546.7	17.0	9.3	5.1	4.1	3.6	5.7	8.2	11.3	11.8
75°	910.2	167.6	13.4	6.7	4.6	3.6	3.1	5.7	8.2	11.3	11.8
77.5°	174.8	42.7	10.8	5.7	4.1	3.6	3.1	5.1	8.2	10.8	11.3
80°	59.1	19.0	8.7	5.1	4.1	3.6	3.1	5.1	7.7	10.3	10.8
82.5°	32.4	10.8	7.7	4.6	4.1	3.1	2.6	4.6	7.2	10.3	10.8
85°	25.2	7.7	6.2	4.6	4.1	3.1	2.6	4.6	7.2	9.8	10.3
87.5°	12.9	5.7	5.1	4.6	4.1	3.1	2.6	4.1	6.7	9.3	10.3
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)