

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: P197067

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-8030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197067
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-03-D-UNV-SL3-8030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 615mA 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: 8267 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

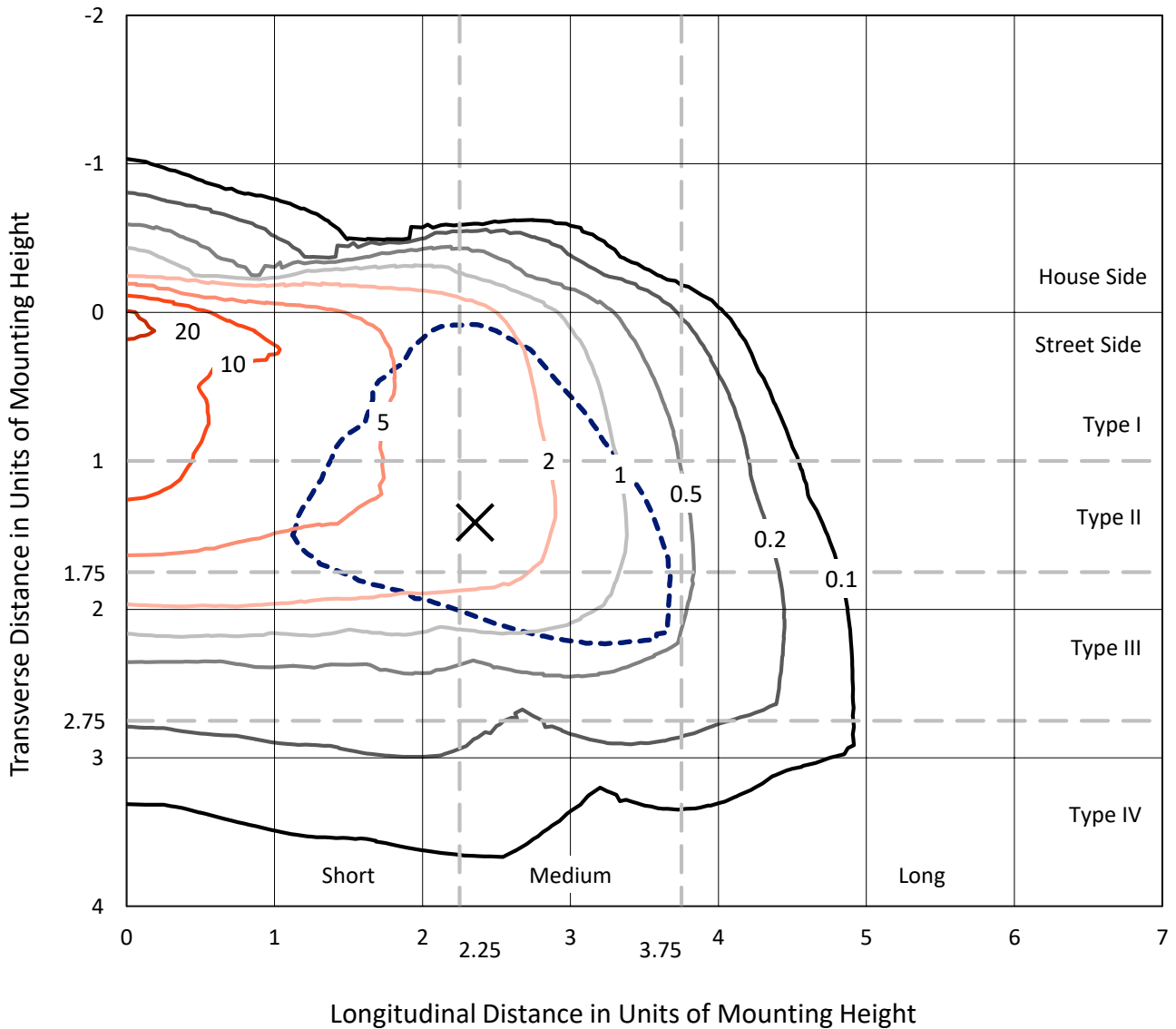
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

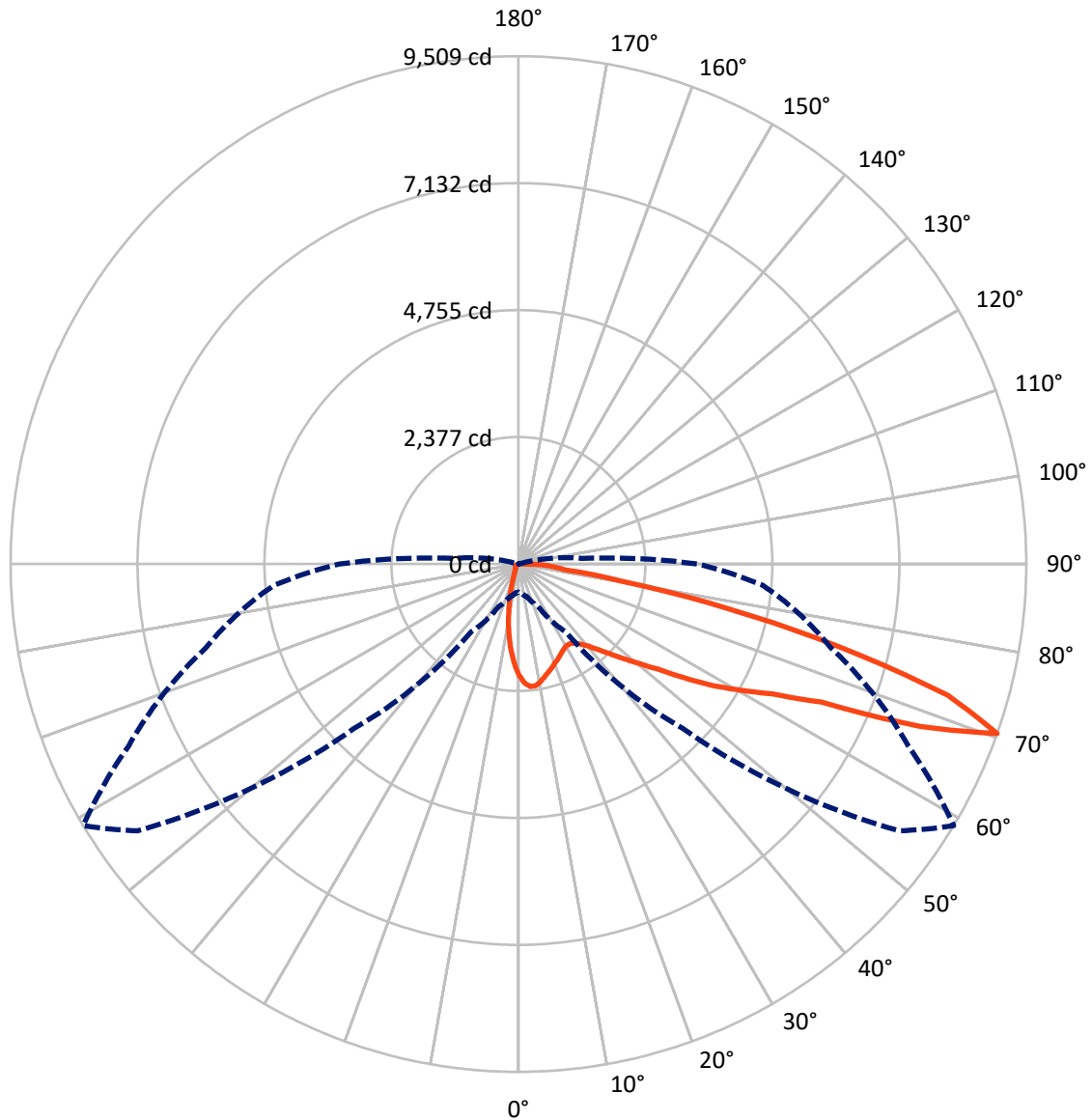


Based on 10 foot mounting height. Maximum calculated value = 22.2 fc
 Type III - Medium - Non-Cutoff

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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
House Side	Lumens	635.5	0.0	635.5
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	7631.5	0.0	7631.5
	% Fixture	92.3	0.0	92.3
Total	Lumens	8267.0	0.0	8267.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.9	2.1
10°-20°	360.5	4.4
20°-30°	488.1	5.9
30°-40°	704.3	8.5
40°-50°	1169.7	14.1
50°-60°	1789.3	21.6
60°-70°	2225.4	26.9
70°-80°	1230.2	14.9
80°-90°	127.6	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°	8267.0	100.0
0°-180°	8267.0	100.0



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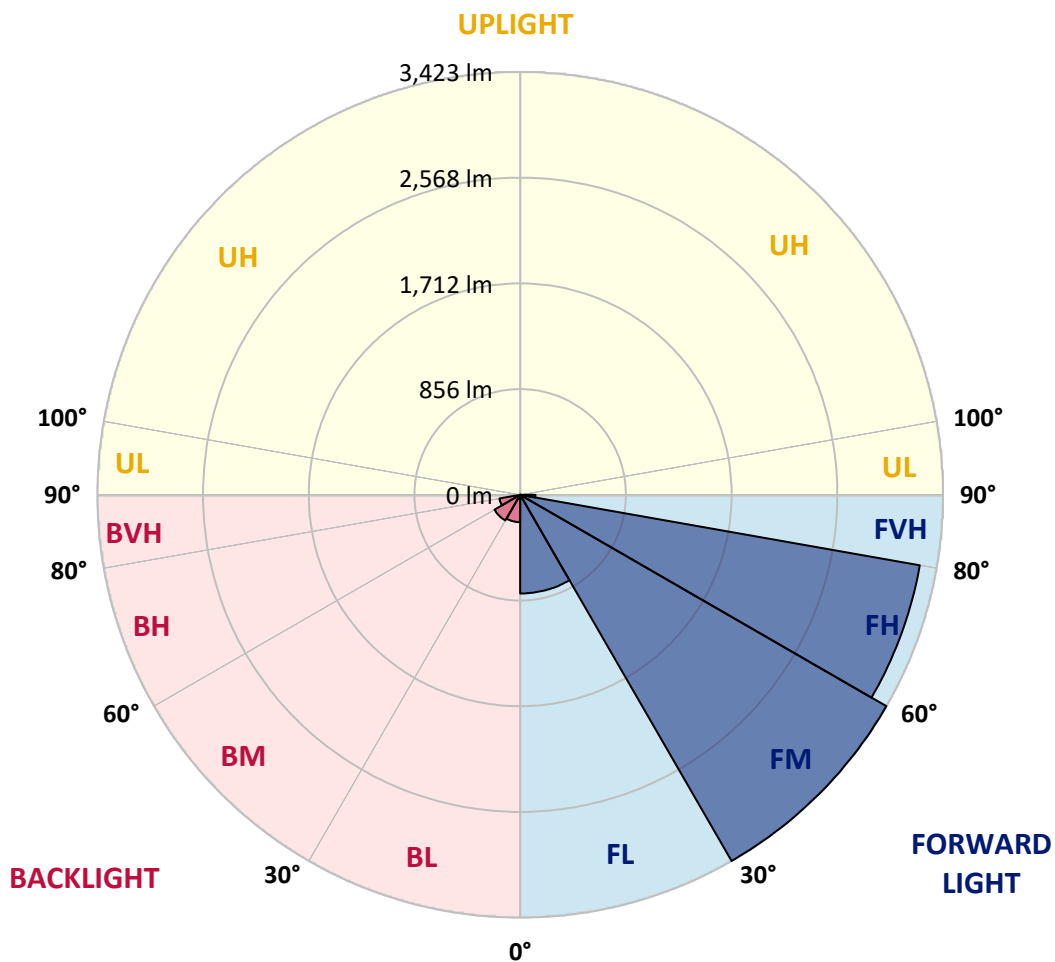
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	799.0	9.7			
FM	(30°-60°)	3423.5	41.4			
FH	(60°-80°)	3285.1	39.7			G2/5000
FVH	(80°-90°)	123.9	1.5			G2/225
BL	(0°-30°)	221.5	2.7	B1/500		
BM	(30°-60°)	239.9	2.9	B1/1000		
BH	(60°-80°)	170.5	2.1	B1/500		G1/500
BVH	(80°-90°)	3.7	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°	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4
2.5°	2363.0	2359.2	2343.6	2340.5	2323.0	2288.1	2247.6	2231.4	2198.3	2145.9	2087.9
5°	2402.2	2404.1	2405.4	2398.5	2396.0	2367.3	2322.4	2303.1	2258.8	2172.7	2066.7
7.5°	2255.1	2260.1	2275.6	2282.5	2312.4	2323.7	2314.3	2301.8	2266.9	2165.3	2016.2
10°	2099.8	2109.1	2126.0	2137.2	2174.0	2203.9	2242.0	2245.1	2237.6	2140.3	1959.5
12.5°	1966.3	1975.1	1993.8	2016.2	2053.6	2092.3	2149.0	2169.0	2194.0	2124.1	1918.9
15°	1851.6	1854.1	1872.2	1900.2	1949.5	2002.5	2069.8	2099.2	2147.8	2117.9	1887.7
17.5°	1751.2	1751.8	1763.6	1789.2	1849.1	1918.9	1997.5	2036.2	2097.9	2109.1	1860.3
20°	1685.1	1684.4	1685.1	1698.8	1751.8	1834.7	1930.2	1970.7	2049.9	2098.5	1832.2
22.5°	1662.6	1659.5	1645.2	1640.2	1673.8	1746.8	1860.9	1913.9	2006.9	2095.4	1811.7
25°	1690.1	1688.2	1657.6	1628.9	1632.1	1677.6	1790.5	1855.3	1973.2	2106.6	1806.7
27.5°	1778.6	1774.9	1728.1	1672.0	1636.4	1644.5	1738.1	1806.0	1946.4	2134.1	1813.5
30°	1894.6	1895.2	1845.3	1777.4	1693.8	1647.6	1710.0	1774.2	1928.3	2175.2	1828.5
32.5°	2023.7	2023.1	1987.5	1908.9	1802.3	1705.0	1722.5	1776.7	1930.8	2235.7	1857.2
35°	2157.2	2150.3	2138.4	2069.2	1944.5	1805.4	1779.2	1819.1	1957.0	2315.6	1905.8
37.5°	2311.2	2308.7	2320.5	2247.6	2120.4	1953.2	1879.0	1905.8	2023.1	2433.4	1984.4
40°	2556.3	2542.6	2548.2	2449.0	2318.7	2152.2	2018.7	2025.6	2128.5	2589.3	2108.5
42.5°	3023.4	2967.9	2863.7	2677.9	2536.9	2372.9	2201.4	2189.6	2277.5	2778.3	2271.9
45°	3581.5	3517.9	3255.4	2930.5	2755.2	2609.9	2427.2	2395.4	2460.9	3003.4	2482.7
47.5°	4047.4	3978.8	3630.8	3194.3	2977.2	2854.4	2677.3	2639.8	2680.4	3264.7	2735.9
50°	4206.4	4168.4	3862.8	3413.8	3201.1	3128.8	2991.0	2928.6	2938.6	3546.6	3031.5
52.5°	4133.5	4120.4	3915.8	3564.1	3408.2	3431.9	3334.6	3269.1	3257.9	3854.7	3358.3
55°	3979.4	3973.2	3873.4	3647.6	3590.9	3709.4	3816.7	3759.9	3653.9	4182.1	3628.3
57.5°	3759.3	3783.0	3854.7	3808.5	3815.4	4002.5	4264.4	4293.7	4135.3	4442.8	3828.5
60°	3171.2	3234.8	3563.5	3981.3	4301.2	4490.2	4744.0	4798.9	4543.2	4621.1	4059.9
62.5°	2344.2	2435.3	2903.6	3671.3	4568.8	5417.5	5382.0	5357.7	4932.3	4860.0	4480.8
65°	1377.0	1483.6	1879.6	2868.7	4165.3	6013.7	6573.1	6236.4	5525.4	5356.4	5151.2
67.5°	686.0	686.6	865.6	1514.2	3078.3	5597.8	8311.8	8117.2	6786.4	6087.9	5415.7
70°	527.6	541.9	640.5	879.9	1556.6	4359.8	8710.3	9509.2	8053.6	6055.5	4594.9
72.5°	447.1	456.5	570.0	765.8	1163.7	2393.5	7540.4	8405.4	7685.1	5116.3	3387.0
75°	321.8	329.3	504.5	694.7	1071.4	1187.4	5172.4	6233.9	5766.1	3599.0	1864.0
77.5°	79.8	79.2	175.9	563.8	958.5	989.1	2967.9	3997.5	3308.4	1473.7	479.0
80°	35.5	34.3	39.9	118.5	891.8	933.6	1305.3	2018.7	1269.1	238.9	146.6
82.5°	24.9	23.7	24.9	43.7	298.1	866.2	788.9	875.0	464.6	81.7	62.4
85°	8.1	7.5	13.7	36.8	83.6	499.5	769.6	653.6	345.5	34.9	41.8
87.5°	1.2	1.2	5.0	20.0	24.3	166.5	451.5	452.8	155.3	20.6	18.7
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°	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4	2090.4
2.5°	2058.6	2021.8	1970.1	1918.3	1871.5	1823.5	1784.8	1766.8	1758.7	1747.4	1723.1
5°	2011.2	1944.5	1831.0	1719.4	1615.2	1515.4	1430.0	1381.4	1329.0	1326.5	1300.9
7.5°	1935.1	1840.3	1661.4	1488.0	1329.0	1176.8	1045.8	961.0	903.0	866.9	841.9
10°	1850.3	1728.7	1491.7	1247.9	1031.5	828.2	659.8	550.0	483.3	449.6	430.3
12.5°	1783.0	1630.2	1324.6	1017.8	746.5	513.3	356.7	276.9	241.3	227.6	221.4
15°	1725.0	1539.8	1168.1	812.0	498.3	295.0	206.4	180.2	174.6	174.6	174.0
17.5°	1666.4	1452.4	1015.9	609.9	313.7	193.3	162.8	159.0	159.7	161.5	161.5
20°	1610.9	1369.5	869.3	434.7	205.8	154.7	147.8	146.6	148.4	150.9	150.3
22.5°	1565.9	1296.5	732.1	298.7	158.4	140.3	136.0	134.1	135.3	137.2	136.6
25°	1534.1	1234.2	606.2	208.3	137.8	127.8	122.9	120.4	119.1	120.4	119.7
27.5°	1514.8	1181.8	487.7	156.5	123.5	115.4	109.1	104.1	101.0	101.0	99.8
30°	1502.3	1132.5	382.3	129.7	111.6	102.9	94.2	87.3	82.3	81.1	80.4
32.5°	1501.7	1090.1	285.6	114.7	100.4	90.4	79.8	71.1	65.5	64.2	63.6
35°	1517.3	1055.8	210.2	103.5	90.4	78.6	66.7	57.4	52.4	52.4	51.8
37.5°	1557.8	1035.9	159.0	94.8	82.3	68.6	56.1	47.4	43.0	44.3	44.3
40°	1633.3	1032.1	129.7	87.9	75.5	59.9	45.5	38.7	36.8	38.7	38.7
42.5°	1748.7	1052.1	115.4	82.9	69.2	51.1	38.0	33.1	32.4	34.3	34.3
45°	1899.0	1091.4	107.3	78.6	62.4	42.4	31.8	28.7	28.1	30.6	30.6
47.5°	2081.1	1144.4	99.8	73.6	55.5	34.9	26.8	24.3	24.3	26.8	27.4
50°	2296.9	1216.1	92.3	68.6	49.9	29.3	22.5	20.6	21.2	23.7	24.3
52.5°	2545.1	1304.0	85.4	64.2	43.7	23.7	18.7	17.5	18.1	20.6	21.2
55°	2759.0	1380.7	77.3	59.9	35.5	19.3	15.6	15.0	15.6	18.7	18.7
57.5°	2945.4	1454.3	69.8	53.0	28.1	15.6	12.5	12.5	13.7	16.8	17.5
60°	3193.0	1570.3	63.6	44.9	21.2	11.8	10.0	10.6	12.5	15.0	15.6
62.5°	3631.4	1767.4	55.5	37.4	15.6	9.4	8.1	8.7	11.2	14.3	15.0
65°	4180.2	1953.9	46.1	31.2	11.8	6.9	6.2	8.1	11.2	14.3	15.0
67.5°	4124.1	1699.4	36.2	24.9	8.7	5.6	5.0	7.5	10.6	14.3	15.0
70°	3344.6	1191.1	26.8	16.8	6.9	5.0	5.0	7.5	10.6	13.7	14.3
72.5°	2319.9	662.9	20.6	11.2	6.2	5.0	4.4	6.9	10.0	13.7	14.3
75°	1103.8	203.3	16.2	8.1	5.6	4.4	3.7	6.9	10.0	13.7	14.3
77.5°	212.0	51.8	13.1	6.9	5.0	4.4	3.7	6.2	10.0	13.1	13.7
80°	71.7	23.1	10.6	6.2	5.0	4.4	3.7	6.2	9.4	12.5	13.1
82.5°	39.3	13.1	9.4	5.6	5.0	3.7	3.1	5.6	8.7	12.5	13.1
85°	30.6	9.4	7.5	5.6	5.0	3.7	3.1	5.6	8.7	11.8	12.5
87.5°	15.6	6.9	6.2	5.6	5.0	3.7	3.1	5.0	8.1	11.2	12.5
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)