

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: P196003

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196003
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-01-D-UNV-AFL-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE 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: 5755.1 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 67
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

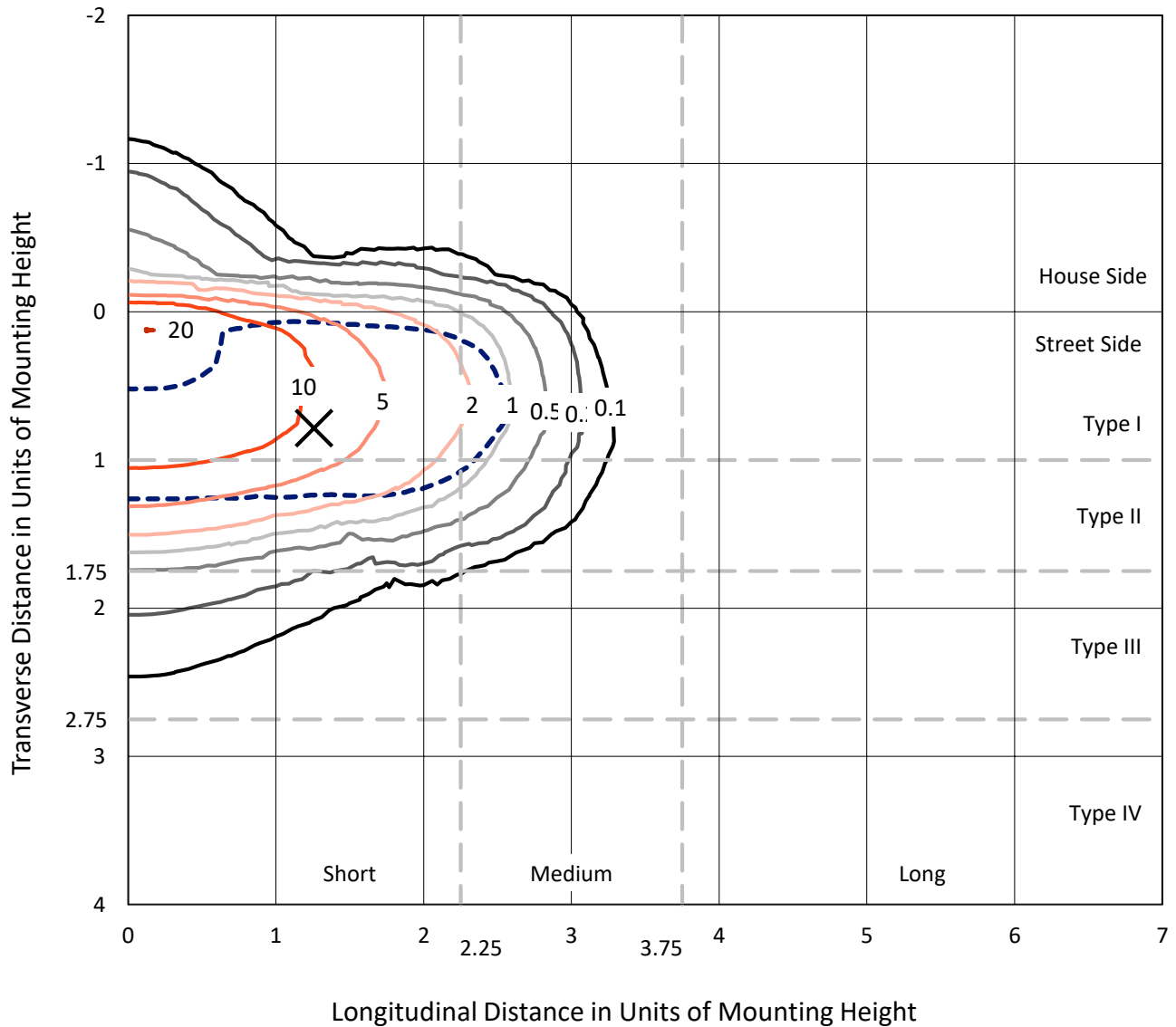


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Iso-Footcandle Lines of Horizontal Illumination

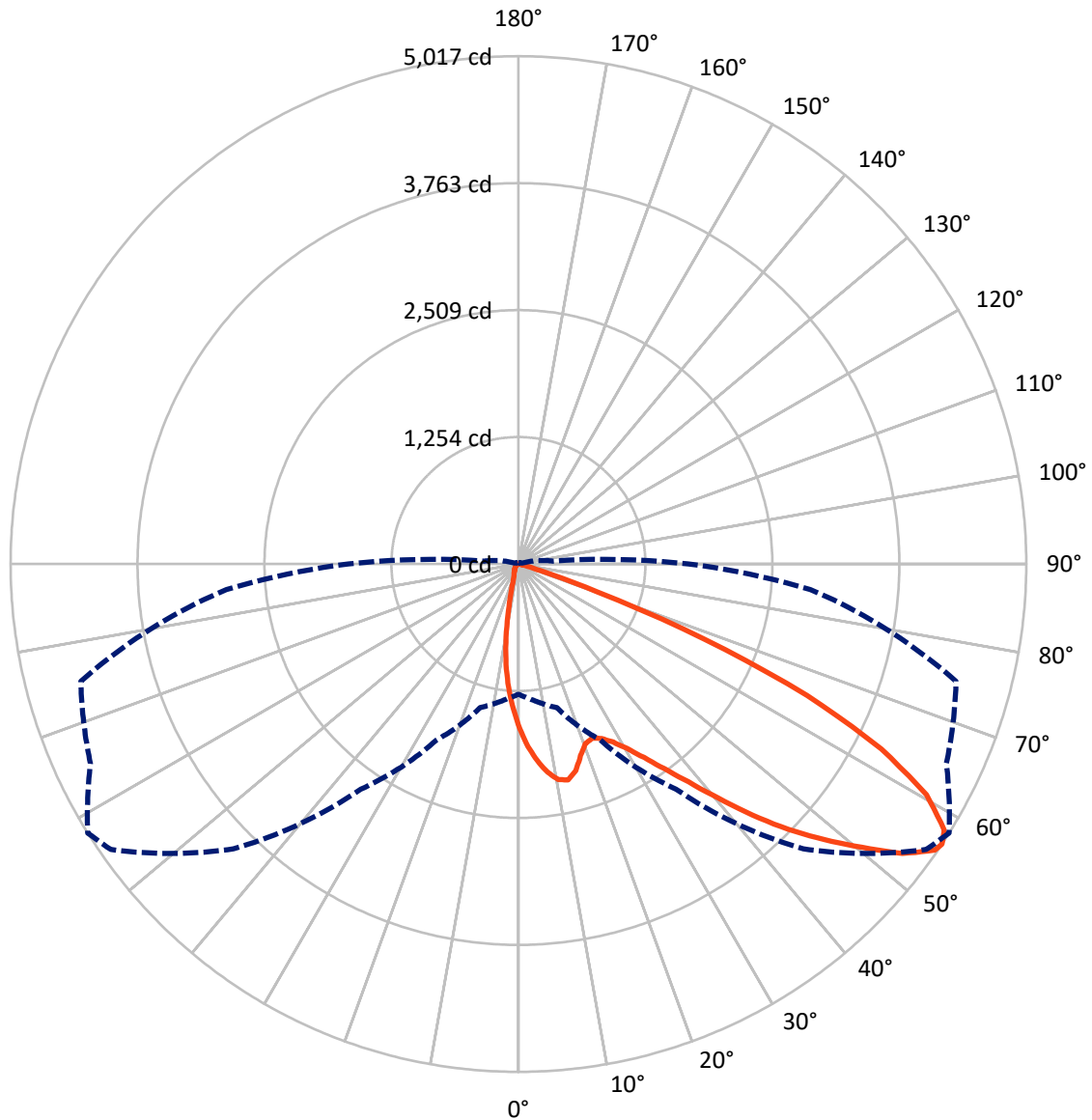
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.3 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
House Side	Lumens	359.3	0.0	359.3
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	5395.9	0.0	5395.9
	% Fixture	93.8	0.0	93.8
Total	Lumens	5755.1	0.0	5755.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.0	2.4
10°-20°	323.4	5.6
20°-30°	544.2	9.5
30°-40°	931.9	16.2
40°-50°	1406.3	24.4
50°-60°	1461.8	25.4
60°-70°	820.6	14.3
70°-80°	112.5	2.0
80°-90°	15.2	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°	5755.1	100.0
0°-180°	5755.1	100.0



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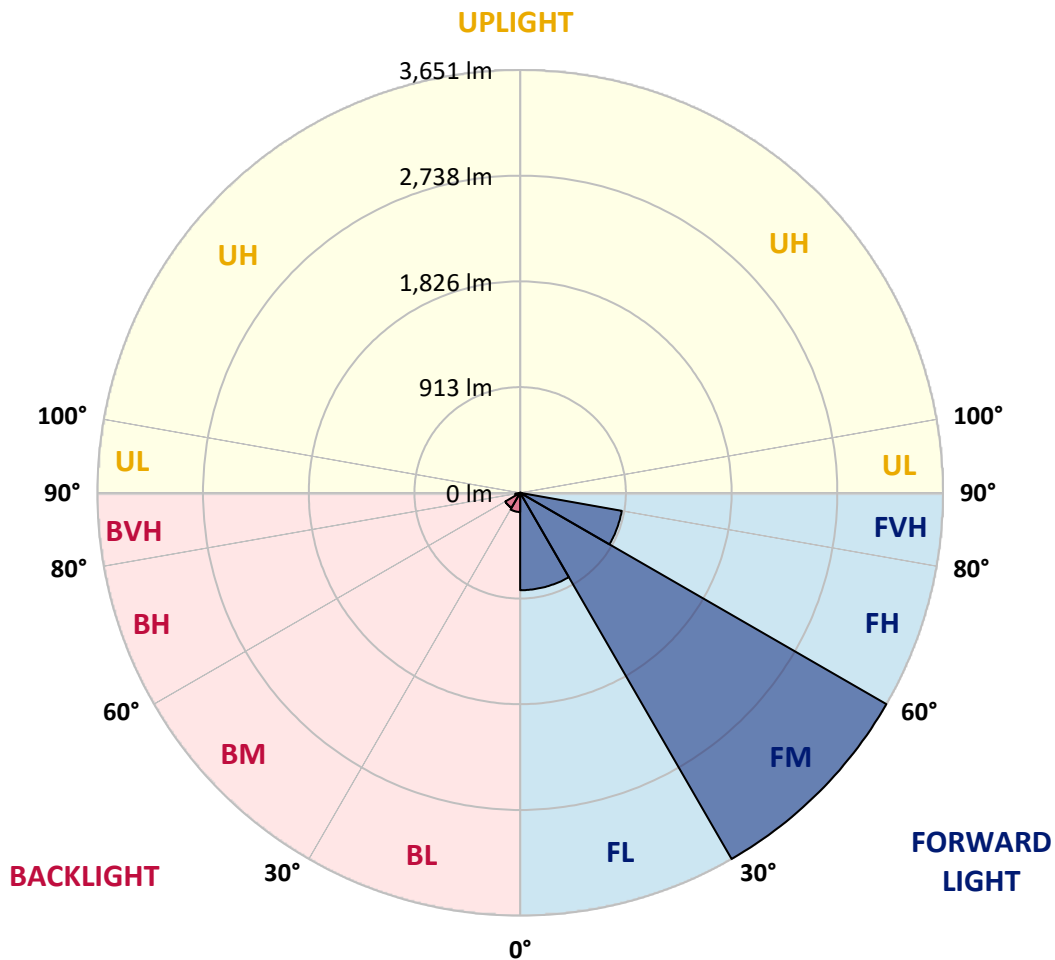
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	841.0	14.6			
FM	(30°-60°)	3651.3	63.4			
FH	(60°-80°)	890.5	15.5			G1/1800
FVH	(80°-90°)	13.1	0.2			G1/100
BL	(0°-30°)	165.7	2.9	B1/500		
BM	(30°-60°)	148.8	2.6	B0/220		
BH	(60°-80°)	42.6	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°	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5
2.5°	1960.5	1948.6	1936.3	1913.5	1892.5	1859.9	1815.2	1804.2	1769.1	1711.1	1657.1
5°	2129.6	2127.3	2119.0	2100.6	2077.7	2038.2	1987.7	1953.9	1899.5	1808.2	1704.1
7.5°	2029.4	2047.9	2078.2	2121.2	2150.2	2146.3	2107.6	2078.2	2024.2	1899.5	1750.2
10°	1710.7	1714.2	1755.9	1846.3	1989.5	2123.0	2173.5	2165.6	2116.0	1979.4	1790.6
12.5°	1598.3	1600.5	1610.1	1639.1	1732.2	1918.3	2147.2	2188.4	2184.4	2055.8	1833.6
15°	1607.1	1608.4	1611.0	1620.3	1646.5	1740.1	2013.7	2118.6	2228.4	2128.2	1875.8
17.5°	1676.4	1675.6	1667.2	1658.4	1666.8	1697.5	1877.5	1988.2	2219.2	2189.3	1910.5
20°	1811.6	1816.0	1787.9	1748.8	1728.7	1730.0	1810.3	1893.4	2167.3	2236.7	1936.3
22.5°	2001.8	2004.9	1958.7	1891.1	1831.9	1802.0	1824.4	1868.3	2107.6	2280.6	1957.4
25°	2228.8	2228.8	2164.3	2068.1	1976.3	1910.9	1891.5	1908.3	2084.8	2330.2	1978.5
27.5°	2473.8	2482.6	2398.3	2272.3	2151.1	2055.3	1994.8	1991.7	2102.4	2392.6	2002.2
30°	2740.4	2748.3	2648.1	2494.1	2350.4	2227.9	2134.8	2114.6	2169.5	2476.5	2036.9
32.5°	3005.5	3012.2	2901.5	2744.3	2577.0	2433.0	2310.4	2278.4	2290.3	2598.9	2087.8
35°	3342.8	3344.1	3204.0	3017.0	2838.3	2669.2	2514.2	2482.6	2469.4	2753.5	2161.2
37.5°	3611.0	3600.5	3511.8	3334.8	3129.8	2953.3	2771.1	2729.8	2698.1	2970.9	2274.9
40°	3674.2	3674.2	3661.1	3607.9	3445.1	3275.2	3098.6	3037.1	2967.4	3226.8	2427.7
42.5°	3509.6	3520.2	3607.1	3722.6	3723.8	3615.0	3442.4	3390.7	3267.7	3518.4	2594.5
45°	3141.2	3144.3	3352.8	3664.6	3876.3	3938.6	3811.3	3739.7	3569.4	3821.3	2747.3
47.5°	3008.6	3018.3	3107.0	3488.1	3887.6	4200.7	4165.1	4066.8	3848.5	4097.9	2890.0
50°	2804.9	2816.7	2925.2	3228.1	3784.9	4368.9	4503.7	4398.3	4102.9	4328.5	2960.7
52.5°	2317.5	2335.9	2489.1	2884.3	3528.1	4376.0	4813.7	4750.5	4363.2	4451.9	2952.4
55°	1594.8	1608.4	1787.1	2251.6	3009.9	4161.3	4947.2	4990.7	4595.5	4479.6	2912.0
56°	1286.6	1337.4	1468.3	1918.3	2714.9	3978.6	4916.4	5017.0	4664.5	4475.2	2894.4
57.5°	850.5	860.2	1002.9	1390.2	2180.1	3582.1	4777.7	4960.8	4753.1	4452.8	2881.8
60°	400.0	404.4	455.7	641.5	1179.9	2610.4	4326.8	4630.6	4785.6	4405.7	2881.2
62.5°	260.9	261.7	267.8	306.1	482.5	1421.8	3586.9	4024.2	4516.4	4400.5	2873.0
65°	214.7	216.9	209.4	214.3	252.5	536.1	2530.1	3137.3	3884.6	4276.7	2778.9
67.5°	189.2	189.7	179.6	173.9	184.8	235.4	1274.7	1979.0	2905.4	3633.8	2289.0
70°	172.6	172.2	160.7	147.5	148.0	156.3	415.4	821.9	1607.5	2157.7	1314.2
72.5°	153.2	154.2	147.5	129.1	123.0	110.7	156.3	221.8	547.1	692.8	346.5
75°	134.3	132.6	126.0	114.2	102.7	74.2	78.6	94.4	142.7	141.4	74.7
77.5°	101.9	100.1	103.2	97.5	80.3	51.8	43.1	49.2	64.5	60.1	30.3
80°	77.7	76.8	70.3	83.5	73.3	39.1	29.5	30.3	35.1	32.0	14.9
82.5°	56.2	55.8	53.1	51.4	46.5	28.5	22.4	23.7	26.4	22.4	10.9
85°	21.5	21.5	41.7	35.1	32.0	19.3	15.9	17.1	20.2	16.3	7.5
87.5°	3.5	3.5	28.1	23.2	14.5	9.6	10.1	10.9	11.9	9.6	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°	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5	1629.5
2.5°	1625.1	1595.6	1531.1	1468.8	1414.3	1354.6	1324.3	1289.1	1276.0	1249.6	1252.3
5°	1641.7	1580.3	1450.7	1314.2	1189.1	1061.7	971.3	886.1	838.6	791.7	791.7
7.5°	1658.8	1564.9	1364.7	1146.4	935.7	717.5	562.9	439.1	370.1	324.1	322.7
10°	1670.7	1545.2	1266.7	952.0	641.1	369.7	223.1	175.6	158.6	151.1	150.6
12.5°	1686.1	1525.4	1155.2	722.7	356.1	175.6	139.2	131.8	128.7	126.8	126.8
15°	1699.2	1497.3	1020.0	486.1	187.1	131.8	119.9	117.2	116.8	116.3	116.8
17.5°	1702.3	1457.3	857.9	284.5	135.6	115.1	109.8	107.6	107.6	107.1	107.1
20°	1695.3	1404.6	678.8	175.6	117.2	105.8	100.1	97.5	97.1	97.1	97.1
22.5°	1680.8	1337.4	501.9	133.1	106.7	97.5	90.0	87.4	87.4	87.8	88.3
25°	1662.8	1258.0	344.6	114.6	98.8	88.7	81.2	78.6	79.5	80.3	80.8
27.5°	1640.0	1163.1	225.7	99.2	88.3	79.9	73.3	71.6	73.3	75.1	76.0
30°	1617.2	1059.1	152.8	86.0	76.4	70.3	66.3	65.9	68.5	72.4	72.9
32.5°	1602.2	952.4	115.5	77.2	67.2	61.9	60.1	61.1	65.0	69.4	70.3
35°	1600.9	848.3	98.3	70.3	61.1	56.2	55.3	58.0	62.4	65.9	66.7
37.5°	1621.6	750.8	89.1	65.0	56.2	51.4	50.0	54.9	58.8	62.4	63.2
40°	1663.2	663.5	83.0	60.1	52.3	46.5	45.6	49.6	53.6	57.5	58.8
42.5°	1715.5	581.8	76.0	55.3	47.9	41.2	40.4	43.5	47.5	53.1	54.0
45°	1760.7	505.8	68.5	50.0	43.1	35.6	35.1	38.7	41.7	47.0	47.9
47.5°	1799.0	442.6	61.5	44.4	36.9	31.6	31.2	32.9	34.7	39.5	40.4
50°	1778.7	389.0	54.4	36.4	29.9	27.2	26.8	26.8	28.9	33.9	34.7
52.5°	1729.1	355.7	47.9	30.3	24.6	23.2	22.0	22.4	24.6	26.8	27.2
55°	1689.2	339.8	42.1	26.8	20.7	19.3	18.0	17.6	18.0	17.1	16.3
56°	1679.5	338.1	40.8	25.9	19.7	18.0	16.3	15.3	14.9	13.2	12.7
57.5°	1675.1	338.1	38.7	24.1	18.4	16.3	14.0	12.3	10.5	9.2	9.2
60°	1671.6	340.3	36.0	21.1	15.9	13.2	10.1	7.5	6.1	6.1	6.1
62.5°	1664.1	339.4	32.9	17.6	13.6	10.1	6.1	4.8	4.4	4.8	5.3
65°	1580.3	315.3	28.9	14.0	10.5	7.1	3.5	3.5	4.0	4.8	5.3
67.5°	1273.4	238.9	23.7	10.9	7.5	5.3	3.1	3.1	4.0	4.8	5.3
70°	699.5	126.0	20.2	7.9	5.7	4.4	3.1	2.7	4.0	4.8	5.3
72.5°	170.8	52.7	18.4	6.1	5.3	4.0	2.7	2.7	4.0	4.8	5.3
75°	42.1	39.5	14.9	4.8	4.4	3.5	2.7	2.7	4.0	4.8	5.3
77.5°	19.7	52.3	10.1	4.4	4.0	3.1	2.7	2.7	4.0	4.8	4.8
80°	11.9	39.5	6.1	4.0	3.5	3.1	2.7	2.7	4.0	4.8	5.3
82.5°	7.1	11.5	4.4	4.0	3.5	2.7	2.7	2.7	4.0	4.8	5.3
85°	6.1	5.7	4.4	4.0	3.5	3.1	2.7	2.7	4.4	5.3	5.3
87.5°	4.8	4.4	4.0	3.5	3.5	3.1	2.7	2.7	4.0	4.8	5.3
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)