

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: P196652

Luminaire Tested: **NAV-AF-02-D-UNV-SL4-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196652
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
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-SL4-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10527.1 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 129
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

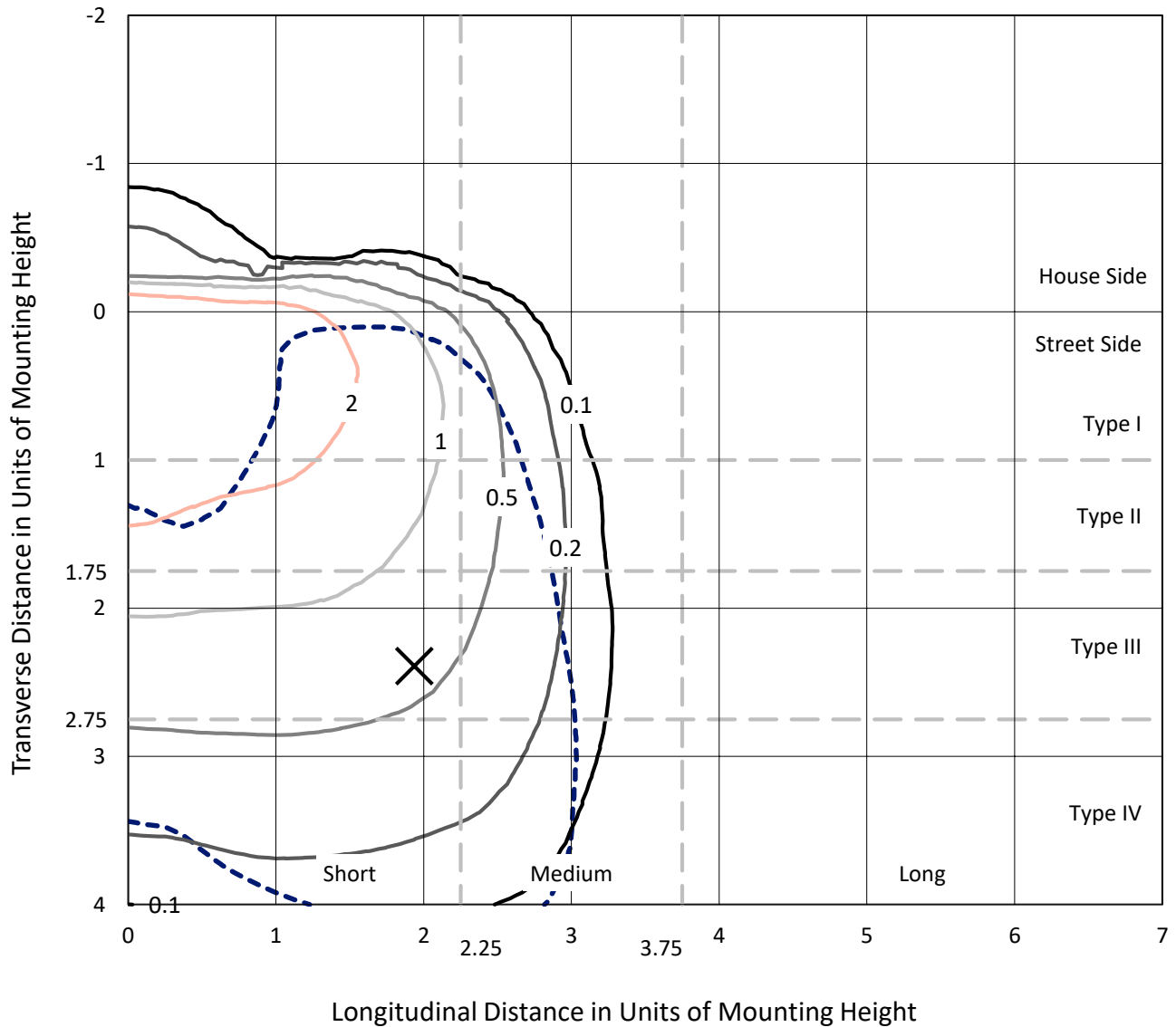


REPORT NUMBER: P196652

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200-HSS

Iso-Footcandle Lines of Horizontal Illumination

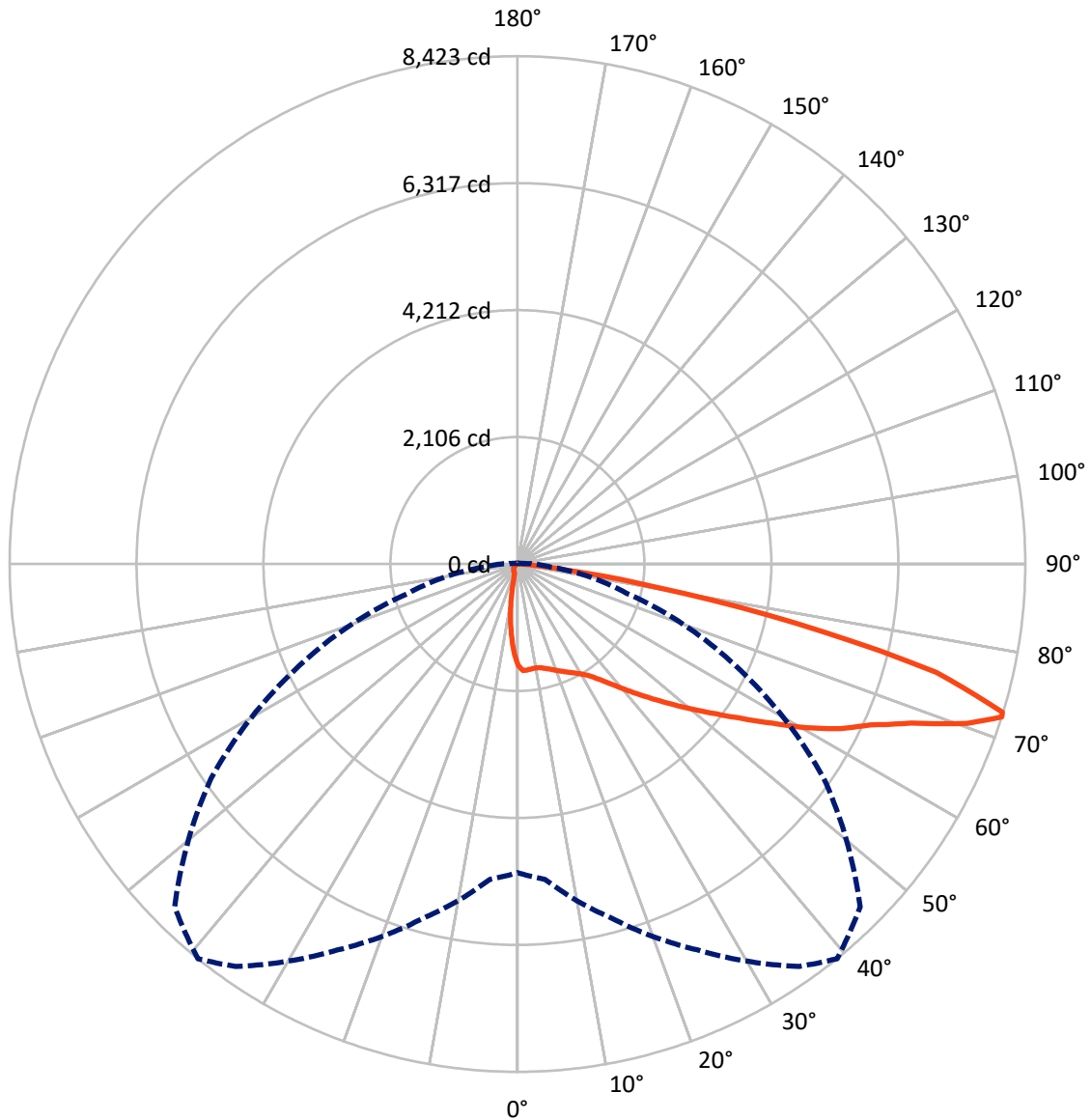
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196652
CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P196652

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	689.9	0.0	689.9
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	9837.2	0.0	9837.2
	% Fixture	93.4	0.0	93.4
Total	Lumens	10527.1	0.0	10527.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.0	1.3
10°-20°	331.8	3.2
20°-30°	551.1	5.2
30°-40°	878.3	8.3
40°-50°	1449.7	13.8
50°-60°	2189.3	20.8
60°-70°	2851.9	27.1
70°-80°	1927.1	18.3
80°-90°	211.1	2.0
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°	10527.1	100.0
0°-180°	10527.1	100.0

Coefficient of Utilization



REPORT NUMBER: P196652

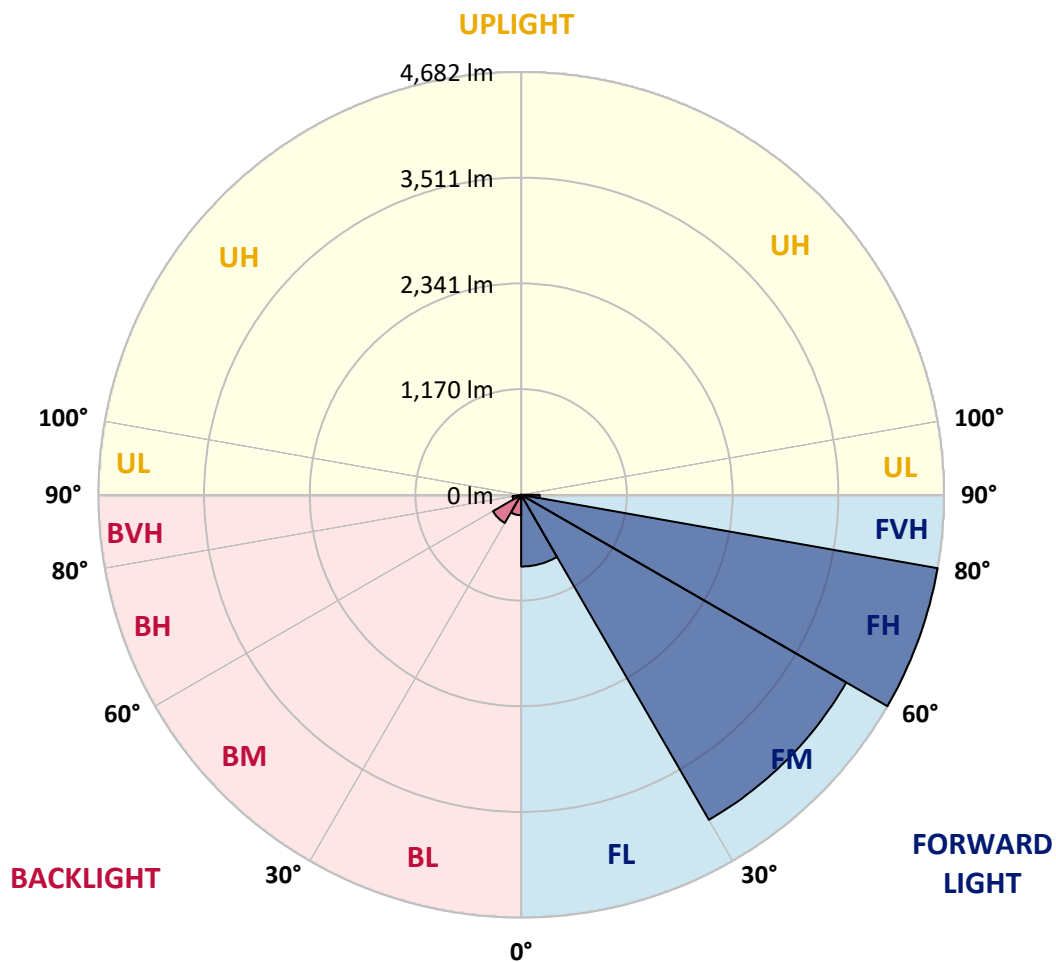
CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	794.0	7.5			
FM	(30°-60°)	4156.3	39.5			
FH	(60°-80°)	4682.0	44.5			G2/5000
FVH	(80°-90°)	205.0	1.9			G2/225
BL	(0°-30°)	225.9	2.1	B1/500		
BM	(30°-60°)	361.0	3.4	B1/1000		
BH	(60°-80°)	97.0	0.9	B0/110		G0/110
BVH	(80°-90°)	6.1	0.1			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 IV Short





REPORT NUMBER: P196652

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9
2.5°	1794.1	1797.6	1793.4	1786.0	1775.1	1768.5	1759.4	1739.5	1714.8	1693.2	1668.4
5°	1808.2	1809.9	1805.0	1790.9	1774.3	1765.2	1753.6	1732.1	1706.4	1676.7	1632.0
7.5°	1812.4	1811.5	1805.7	1788.3	1762.7	1751.1	1731.3	1704.8	1678.3	1651.0	1600.5
10°	1810.8	1810.8	1806.6	1790.0	1761.0	1750.4	1727.9	1699.8	1666.7	1639.4	1585.7
12.5°	1805.0	1808.2	1805.7	1796.7	1775.1	1766.8	1747.0	1718.8	1687.4	1659.3	1602.2
15°	1812.4	1817.3	1822.3	1818.9	1806.6	1799.2	1780.9	1752.0	1726.3	1696.5	1635.3
17.5°	1842.2	1852.9	1864.5	1865.4	1852.1	1838.9	1818.2	1788.3	1763.6	1736.2	1670.0
20°	1898.5	1906.7	1928.2	1932.4	1905.9	1886.9	1857.9	1823.1	1798.3	1775.1	1702.4
22.5°	1982.1	1991.1	2008.5	2002.7	1958.0	1935.6	1899.3	1859.6	1833.9	1820.7	1739.5
25°	2108.7	2111.1	2115.3	2089.6	2016.0	1991.1	1946.5	1901.7	1881.1	1879.4	1792.5
27.5°	2257.7	2260.9	2242.8	2185.6	2080.6	2048.3	1997.8	1957.2	1947.3	1959.7	1859.6
30°	2428.1	2429.0	2378.5	2285.7	2155.0	2119.4	2067.3	2022.6	2031.6	2062.3	1945.6
32.5°	2602.7	2594.5	2524.9	2404.1	2256.8	2213.7	2169.1	2124.3	2150.9	2212.9	2071.4
35°	2762.4	2759.2	2677.2	2536.5	2389.2	2351.2	2318.8	2271.7	2314.7	2415.7	2242.8
37.5°	2922.1	2919.6	2826.2	2679.7	2552.2	2524.9	2501.0	2464.6	2534.9	2683.0	2472.0
40°	3098.4	3094.3	2979.3	2838.5	2741.8	2726.9	2712.8	2697.1	2817.0	3023.1	2757.4
42.5°	3316.1	3297.9	3141.4	3011.5	2950.3	2954.5	2955.3	2971.0	3158.8	3427.8	3094.3
45°	3566.0	3525.5	3304.5	3196.9	3179.6	3204.3	3229.1	3294.6	3556.9	3893.7	3466.7
47.5°	3808.4	3743.1	3492.4	3396.4	3432.0	3483.3	3542.8	3670.2	4003.8	4381.2	3804.3
50°	4017.0	3950.0	3678.5	3599.1	3712.5	3788.7	3894.5	4087.4	4475.5	4793.3	4017.0
52.5°	4181.0	4128.0	3875.5	3822.6	4023.7	4128.0	4294.2	4547.5	4920.7	5064.7	4165.9
55°	4301.7	4275.2	4064.2	4071.6	4369.6	4520.2	4727.1	5013.5	5296.5	5275.8	4277.7
57.5°	4438.2	4417.6	4261.9	4365.5	4785.9	4980.4	5219.6	5449.6	5569.6	5445.4	4387.0
60°	4578.1	4584.7	4502.0	4721.3	5300.6	5515.7	5724.3	5781.5	5803.8	5617.6	4502.0
62.5°	4684.1	4712.3	4719.7	5105.2	5828.6	6012.3	6102.4	6061.9	6057.0	5848.4	4492.8
65°	4805.7	4879.4	5001.9	5526.6	6308.6	6429.4	6494.0	6552.8	6428.6	5917.2	4051.0
67.5°	5015.9	5131.8	5407.3	6042.9	6863.0	7041.8	7224.7	7162.6	6484.0	5219.6	3086.0
70°	5299.0	5440.4	5927.1	6717.4	7615.3	7914.8	8068.0	7113.8	5505.0	3606.5	1627.9
72°	5120.2	5248.5	6087.6	7061.7	8148.2	8423.1	8039.9	6205.2	3990.5	1869.5	545.4
72.5°	4946.3	5078.8	6036.3	7057.5	8201.2	8411.5	7857.0	5846.8	3531.3	1454.9	375.8
75°	3432.0	3599.1	5174.8	6344.1	7405.9	7175.0	6011.5	3540.3	1279.4	249.8	124.1
77.5°	1774.3	1903.4	3139.0	4482.9	5161.5	4727.1	3552.8	1535.9	354.2	132.4	82.0
80°	1099.8	1163.6	1468.1	2208.7	2681.3	2345.4	1567.5	620.7	226.7	78.6	65.3
82.5°	569.4	618.2	924.5	891.3	990.7	823.5	578.4	519.7	139.9	48.8	67.0
85°	187.1	198.7	567.7	592.5	423.7	284.7	256.5	495.7	40.5	31.4	57.2
87.5°	24.8	29.0	199.4	339.2	208.5	129.2	153.9	174.6	14.1	17.4	15.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196652

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9	1684.9
2.5°	1651.8	1641.1	1607.1	1573.3	1534.3	1498.7	1470.6	1452.4	1460.7	1433.4	1437.6
5°	1604.7	1577.3	1502.9	1422.5	1335.7	1254.7	1190.1	1142.1	1132.9	1091.6	1093.2
7.5°	1559.1	1514.5	1393.6	1261.2	1117.1	1000.5	894.7	802.0	768.8	734.9	715.0
10°	1534.3	1473.1	1301.9	1109.0	906.2	734.9	585.9	469.3	420.4	384.8	367.4
12.5°	1541.7	1460.7	1233.1	970.8	704.2	486.6	331.0	245.9	216.0	199.4	193.6
15°	1566.6	1463.2	1171.0	835.9	512.3	294.6	194.5	166.3	163.9	163.1	162.2
17.5°	1589.7	1465.6	1105.6	695.1	342.6	187.8	156.5	153.9	153.9	153.9	153.9
20°	1613.8	1466.5	1033.6	547.8	225.1	153.9	147.3	145.7	147.3	147.3	147.3
22.5°	1641.9	1472.3	964.1	404.7	166.3	144.9	140.7	139.9	140.7	140.7	139.9
25°	1676.7	1484.7	888.9	289.6	150.7	139.0	134.9	134.1	134.9	134.1	134.1
27.5°	1723.0	1501.2	801.1	207.7	144.0	133.2	129.2	129.2	129.2	128.3	128.3
30°	1782.6	1521.1	683.5	163.9	137.3	127.4	124.1	124.1	123.4	122.5	122.5
32.5°	1867.8	1553.3	555.2	148.1	129.9	119.9	116.7	117.6	116.7	115.9	115.0
35°	1988.6	1603.8	428.8	139.9	122.5	112.5	109.3	109.3	109.3	107.6	107.6
37.5°	2159.9	1680.9	321.1	131.5	115.0	105.1	100.9	100.9	100.2	98.5	99.3
40°	2371.8	1777.6	232.5	124.1	107.6	96.8	93.5	91.9	90.2	88.5	88.5
42.5°	2626.7	1871.9	174.6	116.7	100.2	90.2	86.1	84.4	81.1	79.4	78.6
45°	2912.2	1972.1	144.9	107.6	91.9	82.7	79.4	76.2	72.0	69.5	68.8
47.5°	3153.0	2033.4	129.2	98.5	83.6	75.3	72.0	67.0	62.1	60.4	60.4
50°	3297.9	2007.6	115.9	89.4	75.3	67.8	63.7	57.2	53.7	52.1	51.4
52.5°	3379.0	1931.6	105.1	82.0	67.8	59.5	53.7	48.0	46.3	44.7	44.7
55°	3434.4	1821.5	93.5	74.6	61.3	52.1	45.6	41.4	39.8	38.9	38.0
57.5°	3487.3	1687.4	82.7	67.8	54.6	46.3	38.9	37.2	34.0	33.1	33.1
60°	3503.1	1502.9	72.8	60.4	48.8	40.5	34.0	31.4	28.2	27.4	27.4
62.5°	3302.8	1195.9	64.6	51.4	43.0	34.8	29.8	26.4	23.2	23.2	23.2
65°	2760.0	811.8	55.4	44.7	38.0	29.8	25.6	21.6	19.8	19.8	19.8
67.5°	1922.4	452.7	47.2	38.0	32.2	24.8	21.6	18.2	17.4	18.2	18.2
70°	866.4	179.6	39.8	31.4	26.4	20.6	18.2	15.8	17.4	17.4	17.4
72°	259.8	96.0	33.1	25.6	21.6	18.2	15.8	14.9	16.5	17.4	17.4
72.5°	192.9	86.1	31.4	24.8	21.6	17.4	14.9	14.9	16.5	17.4	17.4
75°	99.3	58.8	24.0	18.2	15.8	14.1	12.4	14.1	16.5	16.5	16.5
77.5°	77.8	48.0	19.8	14.1	13.2	12.4	11.6	13.2	14.9	14.9	14.9
80°	72.8	31.4	15.8	13.2	11.6	10.7	10.7	11.6	13.2	14.1	14.1
82.5°	73.6	25.6	14.1	12.4	10.7	10.0	10.0	10.7	12.4	13.2	13.2
85°	47.2	17.4	12.4	10.7	10.0	9.1	9.1	10.0	11.6	12.4	12.4
87.5°	15.8	13.2	10.7	10.0	8.3	8.3	8.3	8.3	10.0	10.7	11.6
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)