

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: P195523

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7050-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195523  
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-7050-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 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: 5626 lumens  
Efficiency: N/A  
Efficacy: 84.0 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

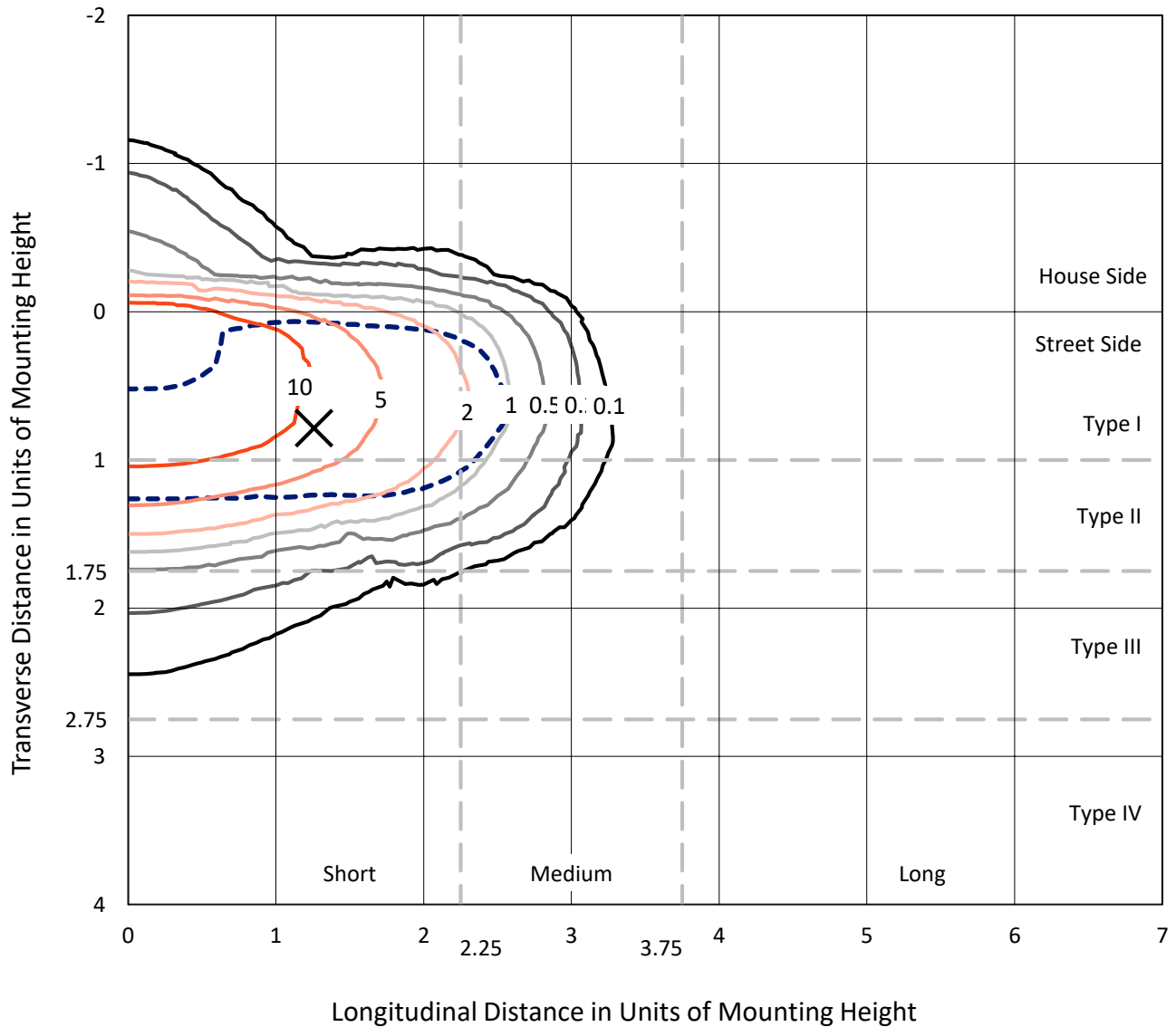


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

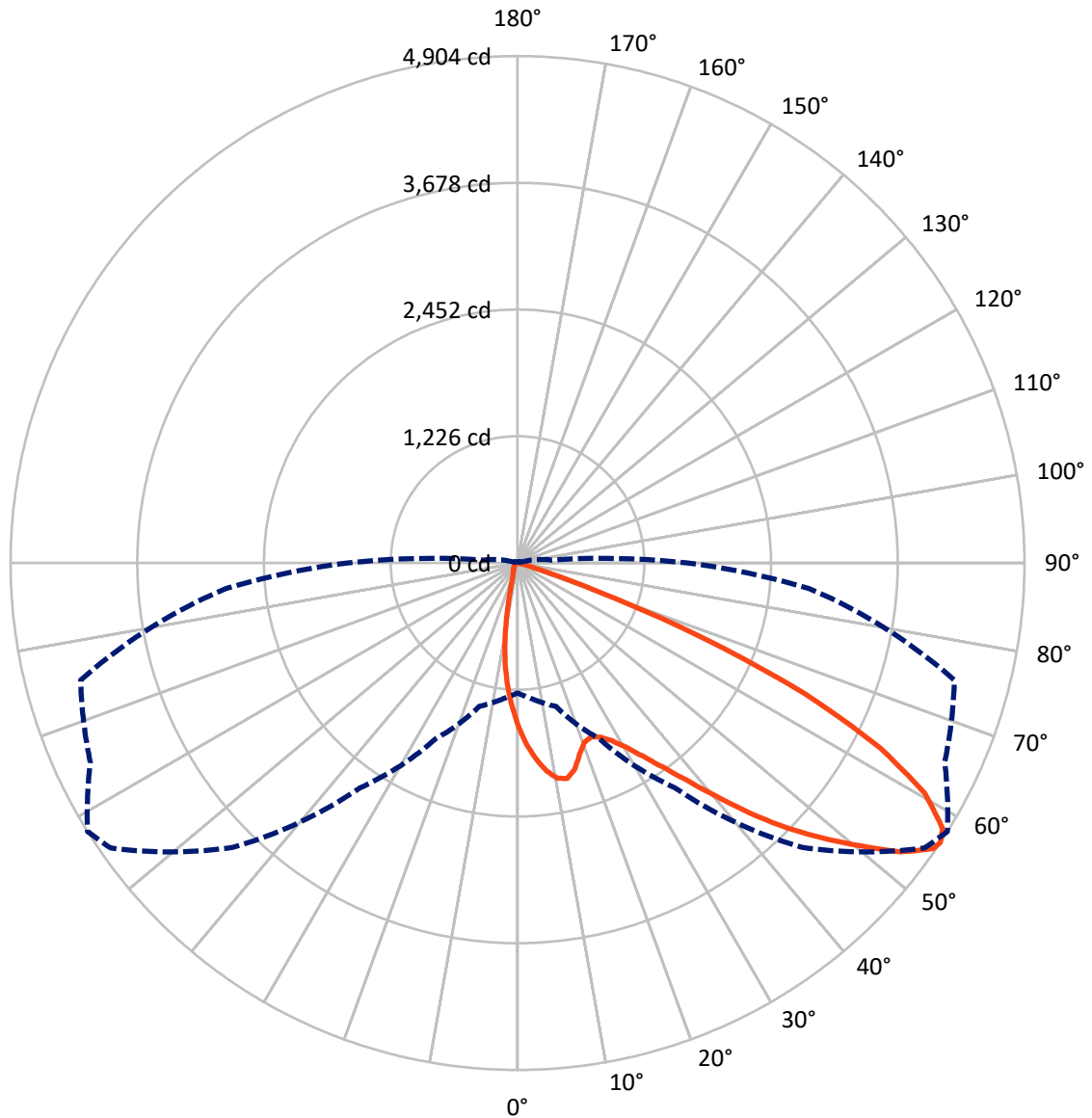


Based on 10 foot mounting height. Maximum calculated value = 19.8 fc  
 Type II - Short - Full Cutoff

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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	351.2	0.0	351.2
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	5274.8	0.0	5274.8
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	5626.0	0.0	5626.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.9	2.4
10°-20°	316.2	5.6
20°-30°	532.0	9.5
30°-40°	911.0	16.2
40°-50°	1374.8	24.4
50°-60°	1429.0	25.4
60°-70°	802.2	14.3
70°-80°	110.0	2.0
80°-90°	14.9	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°	5626.0	100.0
0°-180°	5626.0	100.0

**Coefficient of Utilization**



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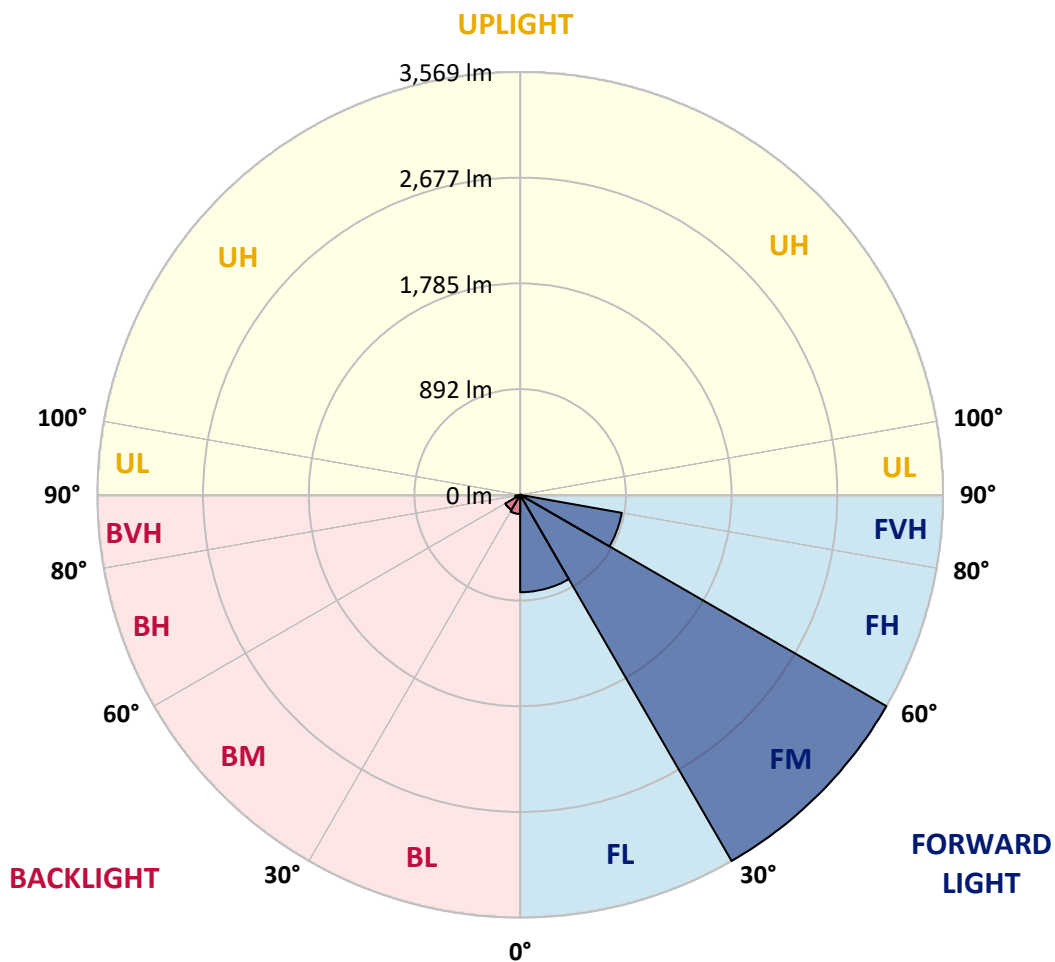
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	822.1	14.6			
FM	(30°-60°)	3569.4	63.4			
FH	(60°-80°)	870.5	15.5			G1/1800
FVH	(80°-90°)	12.8	0.2			G1/100
BL	(0°-30°)	162.0	2.9	B1/500		
BM	(30°-60°)	145.5	2.6	B0/220		
BH	(60°-80°)	41.7	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°	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9
2.5°	1916.5	1904.9	1892.9	1870.6	1850.0	1818.2	1774.5	1763.7	1729.4	1672.7	1619.9
5°	2081.8	2079.6	2071.5	2053.5	2031.1	1992.5	1943.1	1910.1	1856.9	1767.6	1665.9
7.5°	1983.9	2002.0	2031.6	2073.6	2102.0	2098.1	2060.3	2031.6	1978.8	1856.9	1710.9
10°	1672.3	1675.7	1716.5	1804.9	1944.9	2075.4	2124.7	2117.0	2068.5	1935.0	1750.4
12.5°	1562.4	1564.6	1574.0	1602.3	1693.3	1875.3	2099.0	2139.3	2135.4	2009.7	1792.5
15°	1571.0	1572.3	1574.9	1583.9	1609.6	1701.1	1968.5	2071.1	2178.4	2080.5	1833.7
17.5°	1638.8	1638.0	1629.8	1621.2	1629.4	1659.4	1835.4	1943.6	2169.4	2140.2	1867.6
20°	1771.0	1775.3	1747.8	1709.6	1689.9	1691.2	1769.7	1850.9	2118.7	2186.5	1892.9
22.5°	1956.9	1959.9	1914.8	1848.7	1790.8	1761.6	1783.5	1826.4	2060.3	2229.4	1913.5
25°	2178.8	2178.8	2115.7	2021.7	1932.0	1868.0	1849.1	1865.5	2038.0	2277.9	1934.1
27.5°	2418.3	2426.9	2344.5	2221.3	2102.8	2009.2	1950.0	1947.0	2055.2	2338.9	1957.3
30°	2678.9	2686.6	2588.7	2438.1	2297.7	2177.9	2086.9	2067.2	2120.8	2420.9	1991.2
32.5°	2938.1	2944.6	2836.4	2682.7	2519.2	2378.4	2258.6	2227.3	2238.9	2540.6	2041.0
35°	3267.8	3269.1	3132.1	2949.3	2774.6	2609.3	2457.8	2426.9	2414.0	2691.7	2112.7
37.5°	3530.0	3519.7	3433.0	3260.0	3059.6	2887.0	2708.9	2668.6	2637.6	2904.2	2223.9
40°	3591.8	3591.8	3579.0	3527.0	3367.8	3201.7	3029.1	2969.0	2900.8	3154.4	2373.2
42.5°	3430.9	3441.2	3526.2	3639.1	3640.3	3533.9	3365.2	3314.6	3194.4	3439.5	2536.3
45°	3070.7	3073.8	3277.6	3582.4	3789.3	3850.2	3725.8	3655.8	3489.3	3735.6	2685.7
47.5°	2941.1	2950.6	3037.3	3409.8	3800.4	4106.5	4071.7	3975.6	3762.2	4006.0	2825.2
50°	2742.0	2753.5	2859.6	3155.7	3700.0	4270.9	4402.7	4299.6	4010.8	4231.4	2894.3
52.5°	2265.5	2283.5	2433.3	2819.6	3448.9	4277.8	4705.7	4643.9	4265.3	4352.0	2886.2
55°	1559.0	1572.3	1747.0	2201.1	2942.4	4067.9	4836.2	4878.7	4492.4	4379.1	2846.7
56°	1257.7	1307.4	1435.4	1875.3	2654.0	3889.3	4806.1	4904.4	4559.8	4374.8	2829.5
57.5°	831.4	840.9	980.4	1359.0	2131.2	3501.7	4670.5	4849.5	4646.5	4352.9	2817.1
60°	391.0	395.3	445.5	627.1	1153.4	2551.8	4229.7	4526.7	4678.2	4306.9	2816.6
62.5°	255.0	255.8	261.8	299.2	471.7	1389.9	3506.4	3933.9	4415.1	4301.8	2808.5
65°	209.9	212.0	204.7	209.5	246.8	524.1	2473.3	3066.9	3797.4	4180.7	2716.6
67.5°	185.0	185.4	175.6	170.0	180.7	230.1	1246.1	1934.6	2840.2	3552.3	2237.6
70°	168.7	168.3	157.1	144.2	144.7	152.8	406.1	803.5	1571.4	2109.3	1284.7
72.5°	149.8	150.7	144.2	126.2	120.2	108.2	152.8	216.8	534.8	677.3	338.7
75°	131.3	129.6	123.2	111.6	100.4	72.5	76.8	92.3	139.5	138.2	73.0
77.5°	99.6	97.9	100.9	95.3	78.5	50.6	42.1	48.1	63.1	58.8	29.6
80°	76.0	75.1	68.7	81.6	71.7	38.2	28.8	29.6	34.3	31.3	14.6
82.5°	54.9	54.5	51.9	50.2	45.5	27.9	21.9	23.2	25.8	21.9	10.7
85°	21.0	21.0	40.8	34.3	31.3	18.9	15.5	16.7	19.7	15.9	7.3
87.5°	3.4	3.4	27.5	22.7	14.2	9.4	9.9	10.7	11.6	9.4	5.6
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°	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9	1592.9
2.5°	1588.6	1559.8	1496.7	1435.8	1382.6	1324.2	1294.6	1260.2	1247.4	1221.6	1224.2
5°	1604.9	1544.8	1418.2	1284.7	1162.4	1037.9	949.5	866.2	819.8	773.9	773.9
7.5°	1621.6	1529.8	1334.1	1120.7	914.7	701.4	550.3	429.2	361.8	316.8	315.5
10°	1633.2	1510.5	1238.3	930.6	626.7	361.4	218.1	171.7	155.0	147.7	147.2
12.5°	1648.3	1491.2	1129.3	706.5	348.1	171.7	136.1	128.8	125.8	124.0	124.0
15°	1661.1	1463.7	997.1	475.2	182.9	128.8	117.2	114.6	114.2	113.7	114.2
17.5°	1664.1	1424.6	838.7	278.1	132.6	112.5	107.3	105.2	105.2	104.7	104.7
20°	1657.3	1373.1	663.6	171.7	114.6	103.4	97.9	95.3	94.9	94.9	94.9
22.5°	1643.1	1307.4	490.6	130.1	104.3	95.3	88.0	85.4	85.4	85.8	86.3
25°	1625.5	1229.8	336.9	112.0	96.6	86.7	79.4	76.8	77.7	78.5	79.0
27.5°	1603.2	1137.0	220.6	97.0	86.3	78.1	71.7	70.0	71.7	73.4	74.3
30°	1580.9	1035.3	149.4	84.1	74.7	68.7	64.8	64.4	67.0	70.8	71.3
32.5°	1566.3	931.0	112.9	75.5	65.7	60.5	58.8	59.7	63.5	67.8	68.7
35°	1565.0	829.3	96.1	68.7	59.7	54.9	54.1	56.7	61.0	64.4	65.2
37.5°	1585.2	734.0	87.1	63.5	54.9	50.2	48.9	53.7	57.5	61.0	61.8
40°	1625.9	648.6	81.1	58.8	51.1	45.5	44.6	48.5	52.4	56.2	57.5
42.5°	1677.0	568.7	74.3	54.1	46.8	40.3	39.5	42.5	46.4	51.9	52.8
45°	1721.2	494.5	67.0	48.9	42.1	34.8	34.3	37.8	40.8	45.9	46.8
47.5°	1758.6	432.7	60.1	43.4	36.1	30.9	30.5	32.2	33.9	38.6	39.5
50°	1738.8	380.3	53.2	35.6	29.2	26.6	26.2	26.2	28.3	33.1	33.9
52.5°	1690.3	347.7	46.8	29.6	24.0	22.7	21.5	21.9	24.0	26.2	26.6
55°	1651.3	332.2	41.2	26.2	20.2	18.9	17.6	17.2	17.6	16.7	15.9
56°	1641.8	330.5	39.9	25.3	19.3	17.6	15.9	15.0	14.6	12.9	12.4
57.5°	1637.5	330.5	37.8	23.6	18.0	15.9	13.7	12.0	10.3	9.0	9.0
60°	1634.1	332.7	35.2	20.6	15.5	12.9	9.9	7.3	6.0	6.0	6.0
62.5°	1626.8	331.8	32.2	17.2	13.3	9.9	6.0	4.7	4.3	4.7	5.2
65°	1544.8	308.2	28.3	13.7	10.3	6.9	3.4	3.4	3.9	4.7	5.2
67.5°	1244.8	233.5	23.2	10.7	7.3	5.2	3.0	3.0	3.9	4.7	5.2
70°	683.8	123.2	19.7	7.7	5.6	4.3	3.0	2.6	3.9	4.7	5.2
72.5°	167.0	51.5	18.0	6.0	5.2	3.9	2.6	2.6	3.9	4.7	5.2
75°	41.2	38.6	14.6	4.7	4.3	3.4	2.6	2.6	3.9	4.7	5.2
77.5°	19.3	51.1	9.9	4.3	3.9	3.0	2.6	2.6	3.9	4.7	4.7
80°	11.6	38.6	6.0	3.9	3.4	3.0	2.6	2.6	3.9	4.7	5.2
82.5°	6.9	11.2	4.3	3.9	3.4	2.6	2.6	2.6	3.9	4.7	5.2
85°	6.0	5.6	4.3	3.9	3.4	3.0	2.6	2.6	4.3	5.2	5.2
87.5°	4.7	4.3	3.9	3.4	3.4	3.0	2.6	2.6	3.9	4.7	5.2
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)