

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: P196545

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196545  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
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-SL2-7030-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11546.5 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 124  
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

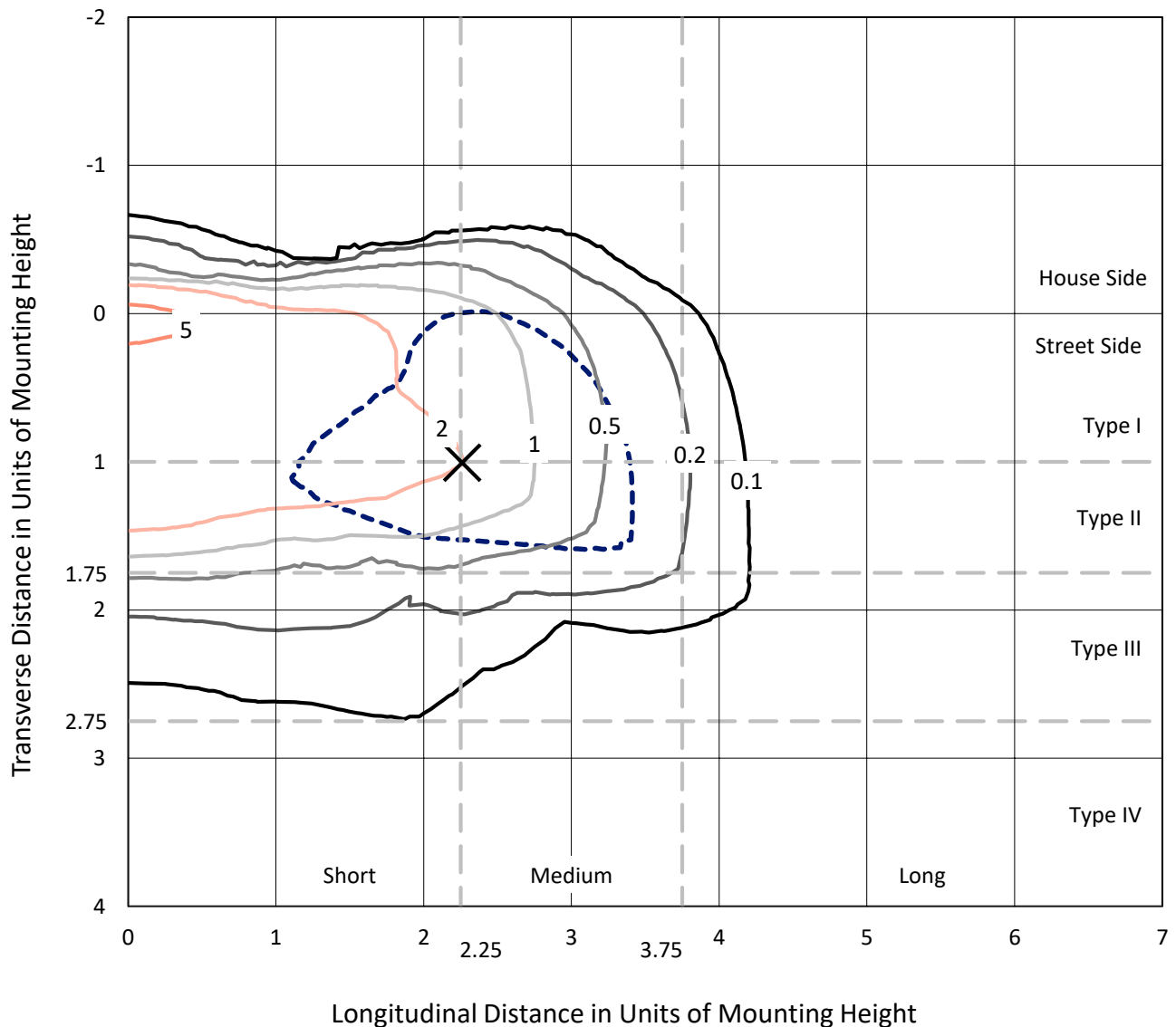


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### Iso-Footcandle Lines of Horizontal Illumination

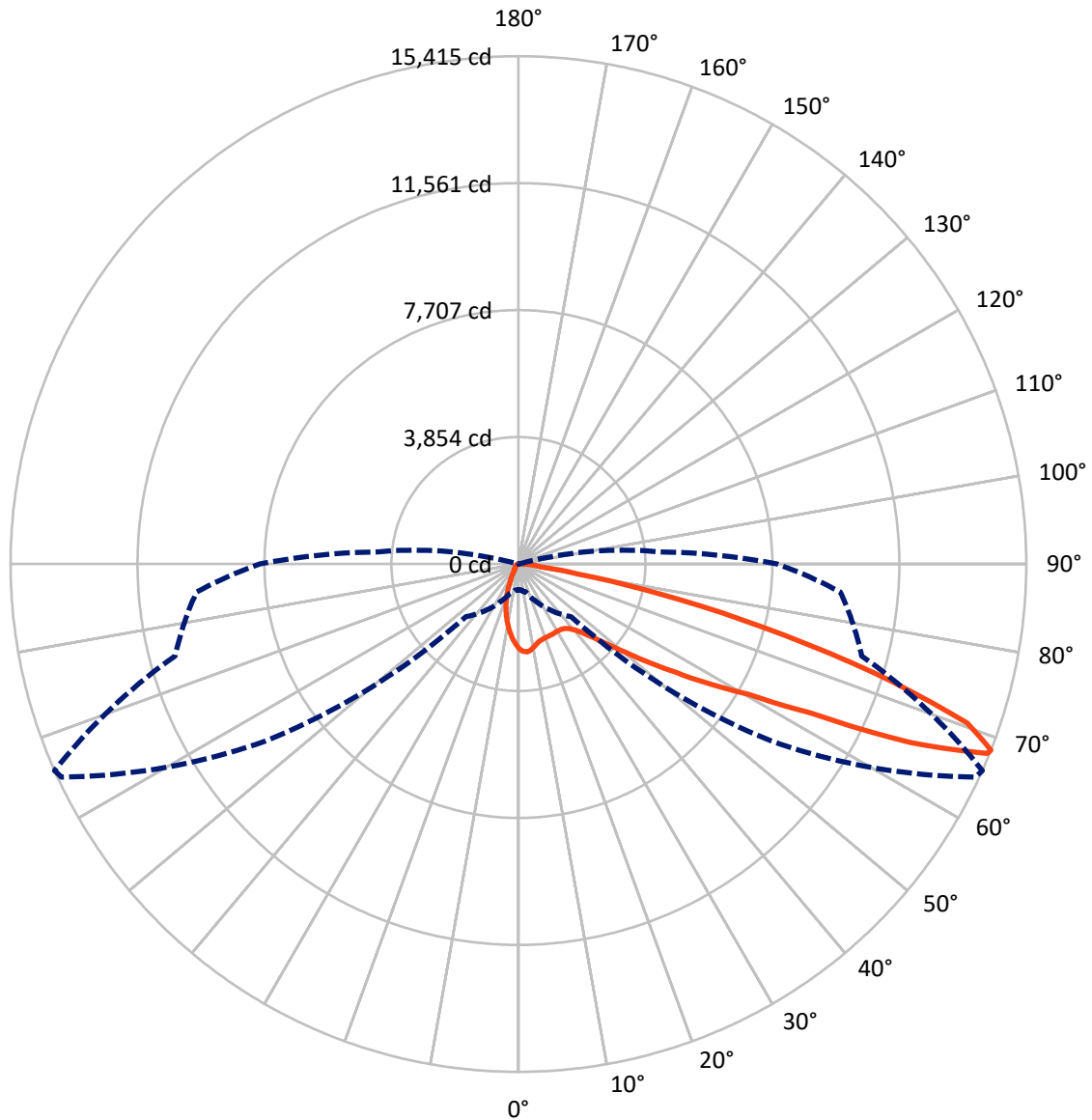
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.4 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1169.5	0.0	1169.5
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	10377.0	0.0	10377.0
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	11546.5	0.0	11546.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.9	1.8
10°-20°	453.7	3.9
20°-30°	657.5	5.7
30°-40°	1006.5	8.7
40°-50°	1721.6	14.9
50°-60°	2693.1	23.3
60°-70°	3101.0	26.9
70°-80°	1551.8	13.4
80°-90°	150.3	1.3
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°	11546.5	100.0
0°-180°	11546.5	100.0

**Coefficient of Utilization**



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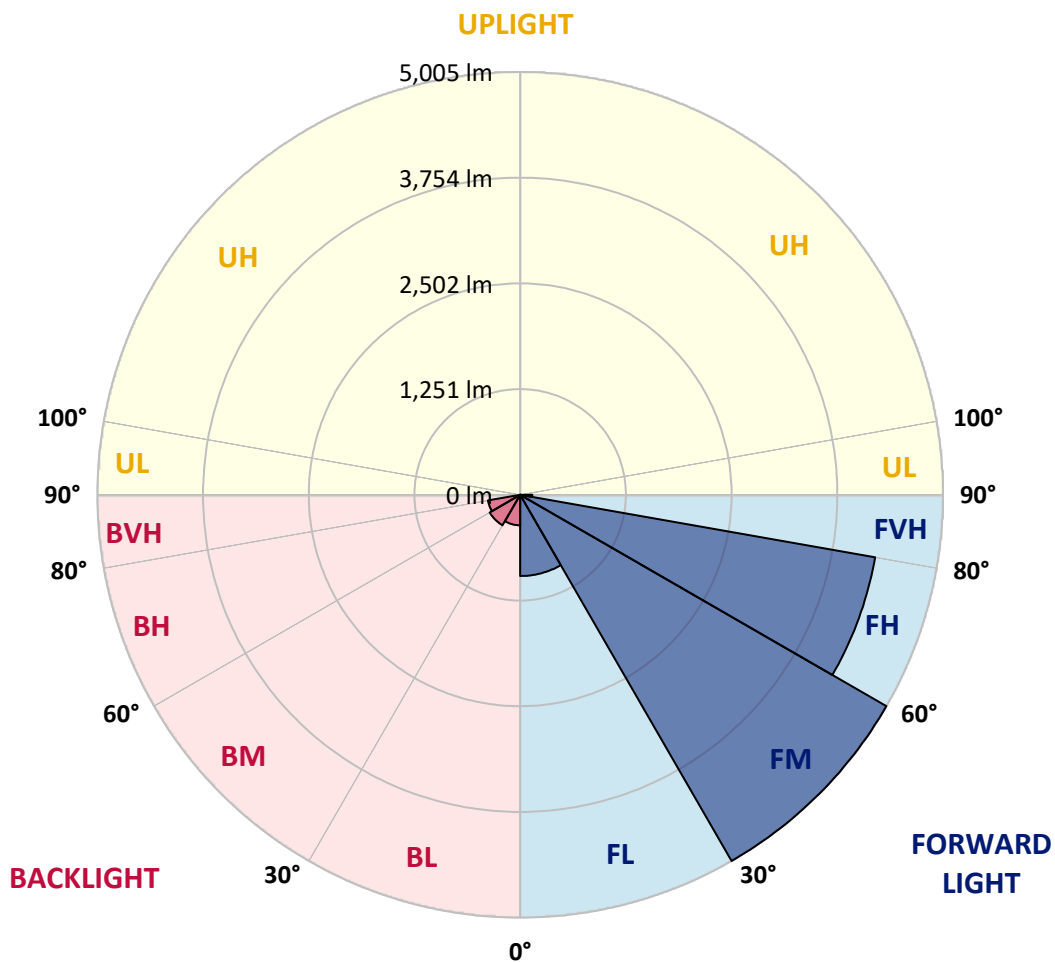
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	961.2	8.3			
FM (30°-60°)	5004.8	43.3			
FH (60°-80°)	4266.4	36.9			G2/5000
FVH (80°-90°)	144.6	1.3			G2/225
BL (0°-30°)	361.0	3.1	B1/500		
BM (30°-60°)	416.5	3.6	B1/1000		
BH (60°-80°)	386.4	3.3	B1/500		G1/500
BVH (80°-90°)	5.7	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5
2.5°	2705.7	2707.6	2706.6	2709.3	2707.6	2693.9	2679.4	2648.6	2651.2	2611.4	2567.0
5°	2515.3	2530.8	2546.2	2561.6	2598.7	2631.4	2670.3	2679.4	2679.4	2644.9	2579.7
7.5°	2321.3	2322.3	2339.5	2360.3	2410.2	2470.1	2560.7	2642.2	2644.1	2653.2	2581.5
10°	2175.5	2179.9	2191.7	2214.4	2264.3	2323.2	2424.7	2552.6	2562.4	2629.6	2563.4
12.5°	2062.2	2067.6	2080.3	2106.5	2151.9	2212.6	2319.6	2465.6	2479.1	2606.9	2558.0
15°	1975.1	1982.4	1992.4	2018.7	2067.6	2131.9	2248.9	2407.5	2423.8	2597.8	2575.1
17.5°	1938.8	1938.8	1937.9	1956.1	2005.0	2070.3	2192.7	2376.7	2397.4	2605.1	2604.2
20°	1954.3	1951.6	1932.5	1928.0	1957.9	2023.2	2148.2	2356.7	2380.3	2618.7	2639.4
22.5°	2035.8	2030.4	1987.8	1952.5	1943.4	1986.9	2118.3	2343.2	2371.3	2646.8	2686.6
25°	2209.0	2192.7	2133.8	2054.0	1982.4	1977.8	2097.4	2335.9	2365.8	2679.4	2738.4
27.5°	2433.8	2429.3	2335.0	2228.1	2090.2	2007.7	2091.1	2330.4	2360.3	2703.0	2780.0
30°	2712.9	2714.8	2606.0	2466.4	2258.0	2092.1	2111.1	2327.8	2358.6	2704.8	2798.1
32.5°	3001.3	3003.0	2912.5	2762.8	2487.3	2237.1	2167.2	2340.5	2368.5	2697.5	2797.2
35°	3278.6	3281.3	3226.9	3106.3	2793.6	2438.3	2273.3	2383.9	2403.8	2702.1	2795.4
37.5°	3629.4	3640.2	3573.1	3460.8	3178.0	2733.7	2446.5	2471.9	2488.2	2739.2	2809.0
40°	4227.6	4213.1	4021.0	3830.6	3594.9	3093.6	2696.6	2623.2	2628.7	2835.3	2860.7
42.5°	4924.7	4906.5	4577.5	4249.3	4023.7	3527.9	3016.6	2855.3	2854.4	2996.7	2973.1
45°	5524.7	5513.9	5167.5	4729.8	4498.6	4007.3	3410.8	3189.8	3178.9	3275.8	3178.0
47.5°	5950.7	5941.6	5679.8	5240.9	5047.9	4535.0	3903.1	3645.7	3623.0	3641.2	3510.6
50°	5992.5	5982.5	5890.9	5609.1	5689.6	5309.0	4511.4	4243.0	4214.0	4185.9	4013.6
52.5°	5602.7	5601.7	5649.8	5631.7	6139.3	6305.2	5257.3	4981.7	4947.3	4875.7	4704.3
55°	4805.9	4801.4	4983.6	5248.3	6129.3	7333.1	6394.8	5861.0	5815.7	5672.4	5447.6
57.5°	3511.5	3488.0	3868.7	4429.7	5698.8	7782.6	8201.4	6953.3	6878.0	6423.9	6077.6
60°	1938.8	1947.9	2437.3	3101.8	4679.0	7693.8	9863.8	8226.7	8029.1	7072.1	6723.0
62.5°	1086.8	1109.5	1473.9	2016.0	2983.1	6973.2	10755.7	10418.5	9942.7	7828.0	7538.8
65°	822.1	835.8	1018.9	1555.5	1880.9	4873.0	10898.1	13483.1	13072.6	8973.7	8837.8
67.5°	774.1	784.9	874.7	1289.8	1713.1	2527.1	9826.7	15296.1	15347.7	10536.4	9843.8
68°	779.6	793.1	882.9	1240.8	1710.5	2260.7	9369.7	15305.1	15414.9	10788.4	9809.4
70°	716.0	719.7	933.6	1217.3	1657.9	1781.2	6778.3	14256.3	14453.1	11088.4	8904.7
72.5°	273.7	274.7	418.8	1054.2	1736.6	1791.1	3414.6	11267.9	11277.8	9649.9	6942.4
75°	142.2	119.6	131.4	330.0	1658.8	1745.8	1713.1	7693.8	7645.8	6526.3	4253.9
77.5°	97.9	83.4	88.0	114.1	689.8	1744.9	1237.3	4424.4	4414.3	2776.4	1213.8
80°	55.2	48.1	52.6	96.0	242.0	1637.9	1153.0	1901.6	1792.1	487.7	196.6
82.5°	28.1	23.6	28.1	80.7	150.4	1030.7	1121.2	746.0	664.4	116.1	127.9
85°	7.2	7.2	13.5	56.2	93.4	338.0	1005.1	538.4	484.0	50.8	90.6
87.5°	1.8	0.9	5.5	20.9	33.6	73.4	557.4	300.0	258.3	26.3	52.6
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°	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5	2572.5
2.5°	2548.9	2523.6	2473.6	2417.5	2377.6	2334.1	2308.6	2277.8	2254.3	2233.5	2248.9
5°	2539.8	2490.9	2380.3	2256.1	2151.9	2052.2	1977.8	1907.1	1853.7	1820.2	1833.7
7.5°	2516.2	2443.7	2264.3	2070.3	1899.9	1739.4	1609.0	1491.9	1401.4	1352.4	1367.8
10°	2476.4	2373.9	2132.8	1863.6	1625.2	1398.6	1204.7	1030.7	899.2	837.6	852.0
12.5°	2447.4	2312.4	1996.8	1664.2	1350.6	1028.7	771.4	572.0	469.5	407.9	413.3
15°	2434.7	2264.3	1870.0	1453.9	1050.5	660.8	417.0	301.9	266.5	253.8	254.7
17.5°	2436.5	2226.1	1749.5	1235.5	747.8	379.7	255.6	230.2	224.7	222.2	222.2
20°	2441.1	2188.1	1624.3	1007.9	478.5	244.7	213.0	204.9	202.1	198.6	199.4
22.5°	2454.6	2159.1	1498.4	779.6	294.6	199.4	188.6	181.3	176.8	171.3	172.2
25°	2475.5	2137.3	1374.2	561.0	207.6	174.0	164.1	154.0	146.0	139.7	140.5
27.5°	2488.2	2106.5	1241.8	382.5	172.2	152.3	138.6	125.1	116.1	110.6	109.7
30°	2479.1	2056.7	1091.4	251.1	152.3	131.4	115.2	99.8	90.6	86.1	86.1
32.5°	2454.6	1992.4	925.4	183.1	135.1	113.3	93.4	79.8	73.4	70.7	71.6
35°	2426.5	1925.2	748.8	155.0	121.5	96.0	76.2	65.2	62.5	61.6	61.6
37.5°	2411.2	1867.2	579.2	140.5	108.8	79.8	62.5	56.2	53.4	53.4	53.4
40°	2428.3	1822.9	428.8	129.6	96.0	66.2	52.6	48.1	47.1	47.1	47.1
42.5°	2501.7	1807.4	313.6	120.5	83.4	55.2	45.4	41.7	40.8	41.7	41.7
45°	2644.9	1841.0	237.5	111.5	71.6	45.4	39.0	36.3	36.3	37.1	37.1
47.5°	2887.9	1927.2	194.9	102.3	59.9	38.0	33.6	31.6	31.6	32.7	32.7
50°	3265.0	2086.7	175.0	92.5	49.8	32.7	28.1	27.2	27.2	28.1	29.0
52.5°	3837.8	2390.3	165.0	82.5	40.8	27.2	23.6	22.6	23.6	24.5	24.5
55°	4475.0	2779.1	153.2	72.5	34.4	22.6	19.0	19.0	20.0	21.8	21.8
57.5°	5068.7	3154.5	142.2	59.9	29.9	18.1	15.4	15.4	17.3	19.0	19.0
60°	5696.0	3522.4	127.9	48.1	25.3	14.5	12.7	12.7	15.4	17.3	18.1
62.5°	6471.0	3950.3	108.8	38.0	20.0	10.9	9.1	11.8	14.5	17.3	17.3
65°	7591.4	4482.4	85.2	29.9	15.4	8.2	7.2	10.9	13.5	16.3	17.3
67.5°	7998.4	4414.3	64.4	24.5	11.8	6.3	6.3	10.0	13.5	16.3	16.3
68°	7849.7	4265.7	61.6	23.6	10.9	6.3	6.3	10.0	13.5	16.3	16.3
70°	6839.9	3487.0	50.8	18.1	9.1	5.5	5.5	9.1	13.5	15.4	16.3
72.5°	5121.3	2316.9	43.4	11.8	8.2	5.5	4.5	9.1	12.7	15.4	15.4
75°	2937.8	961.7	37.1	9.1	7.2	4.5	4.5	8.2	12.7	15.4	15.4
77.5°	830.3	224.7	29.9	7.2	6.3	4.5	3.6	8.2	11.8	14.5	14.5
80°	152.3	67.0	23.6	6.3	5.5	4.5	3.6	8.2	11.8	14.5	14.5
82.5°	100.6	31.6	17.3	6.3	5.5	4.5	3.6	7.2	10.9	13.5	13.5
85°	75.3	22.6	10.9	6.3	5.5	4.5	3.6	7.2	10.9	13.5	13.5
87.5°	41.7	10.0	8.2	7.2	6.3	4.5	3.6	6.3	10.0	12.7	12.7
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)