

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: P196587

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196587  
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-SL3-7030-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 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: 9798.4 lumens  
Efficiency: N/A  
Efficacy: 102.1 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

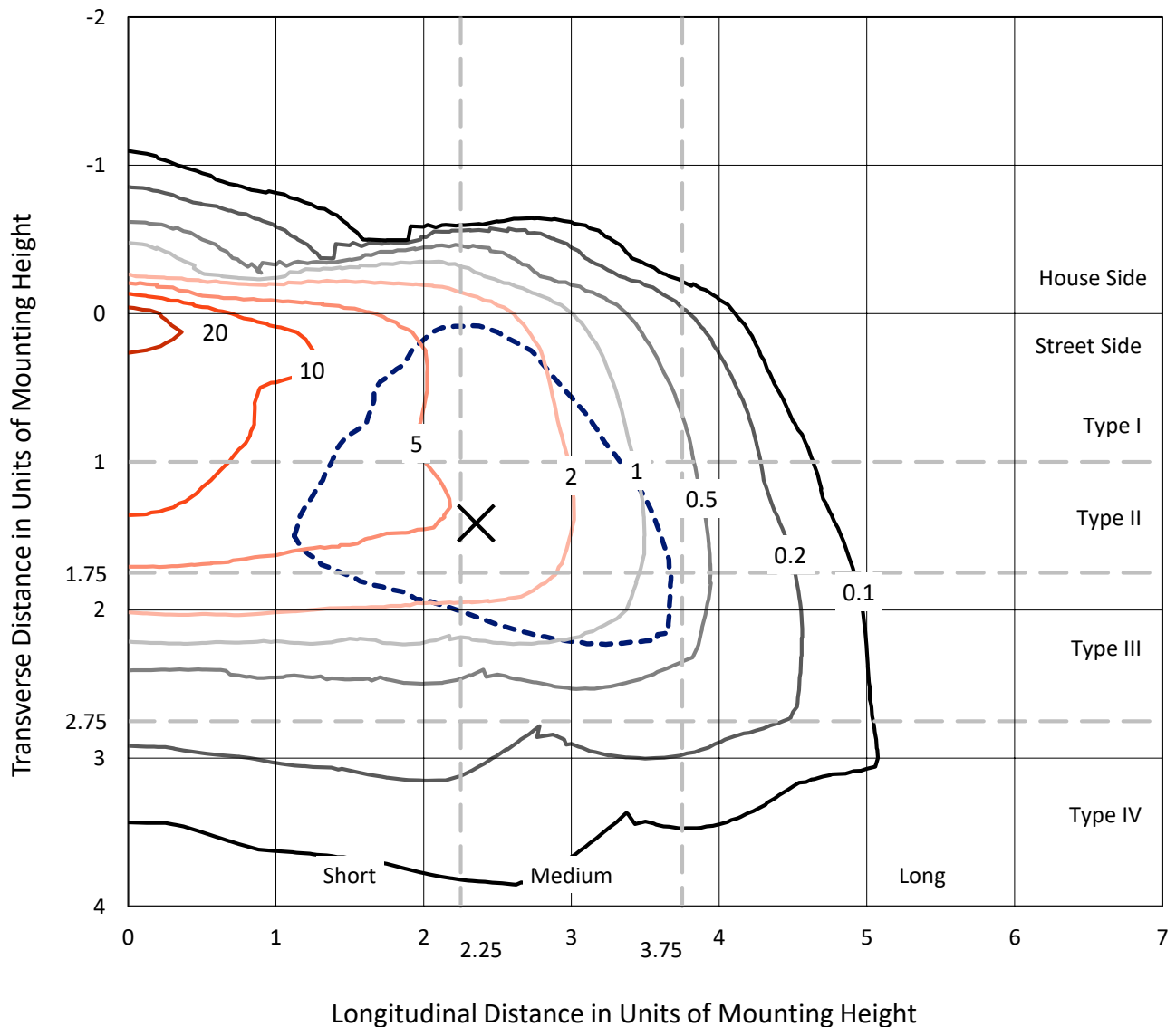
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

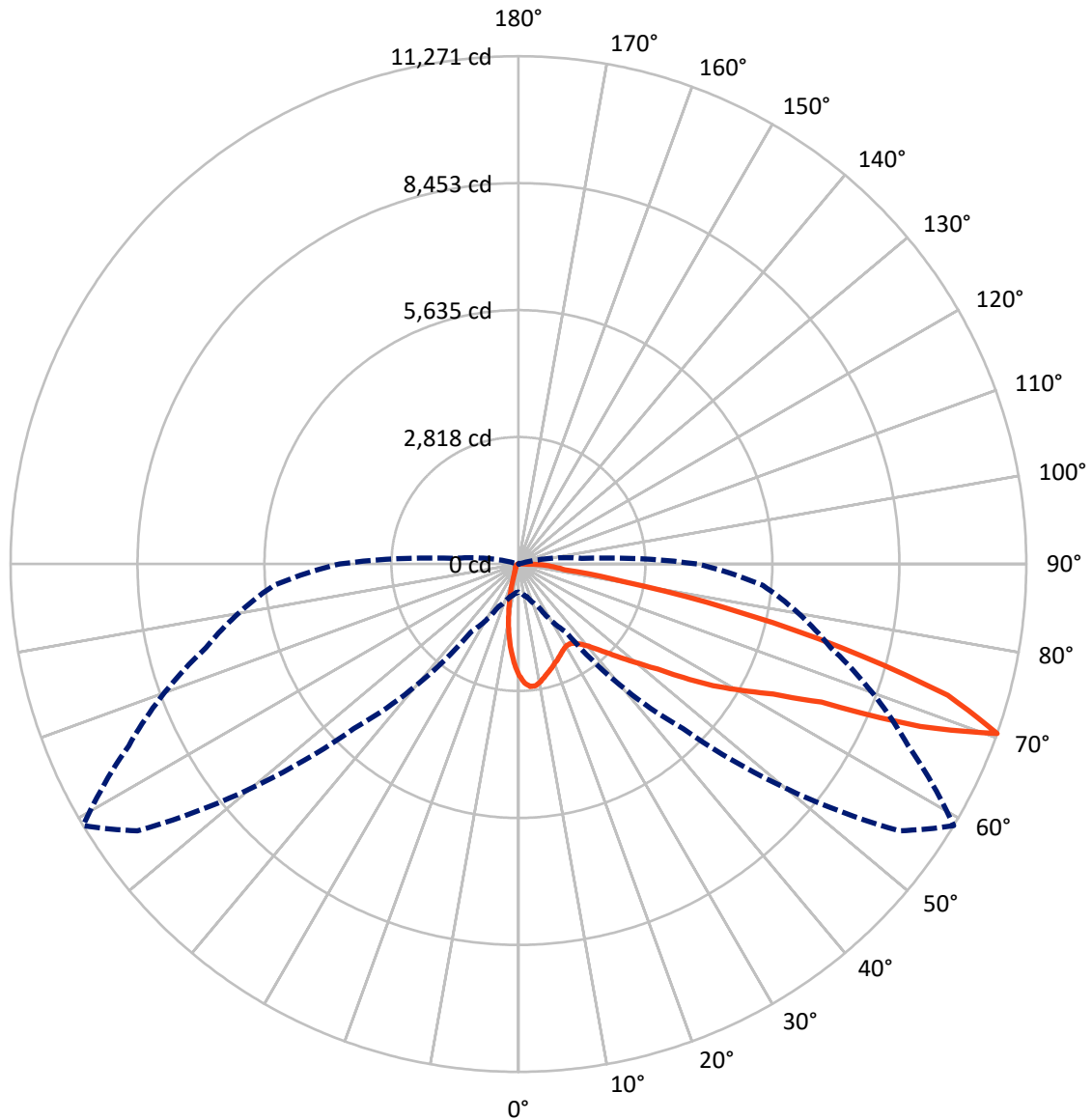
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 26.4 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
<b>House Side</b>	Lumens	753.3	0.0	753.3
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	9045.1	0.0	9045.1
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	9798.4	0.0	9798.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	203.7	2.1
10°-20°	427.3	4.4
20°-30°	578.5	5.9
30°-40°	834.8	8.5
40°-50°	1386.4	14.1
50°-60°	2120.7	21.6
60°-70°	2637.7	26.9
70°-80°	1458.1	14.9
80°-90°	151.2	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°	9798.4	100.0
0°-180°	9798.4	100.0



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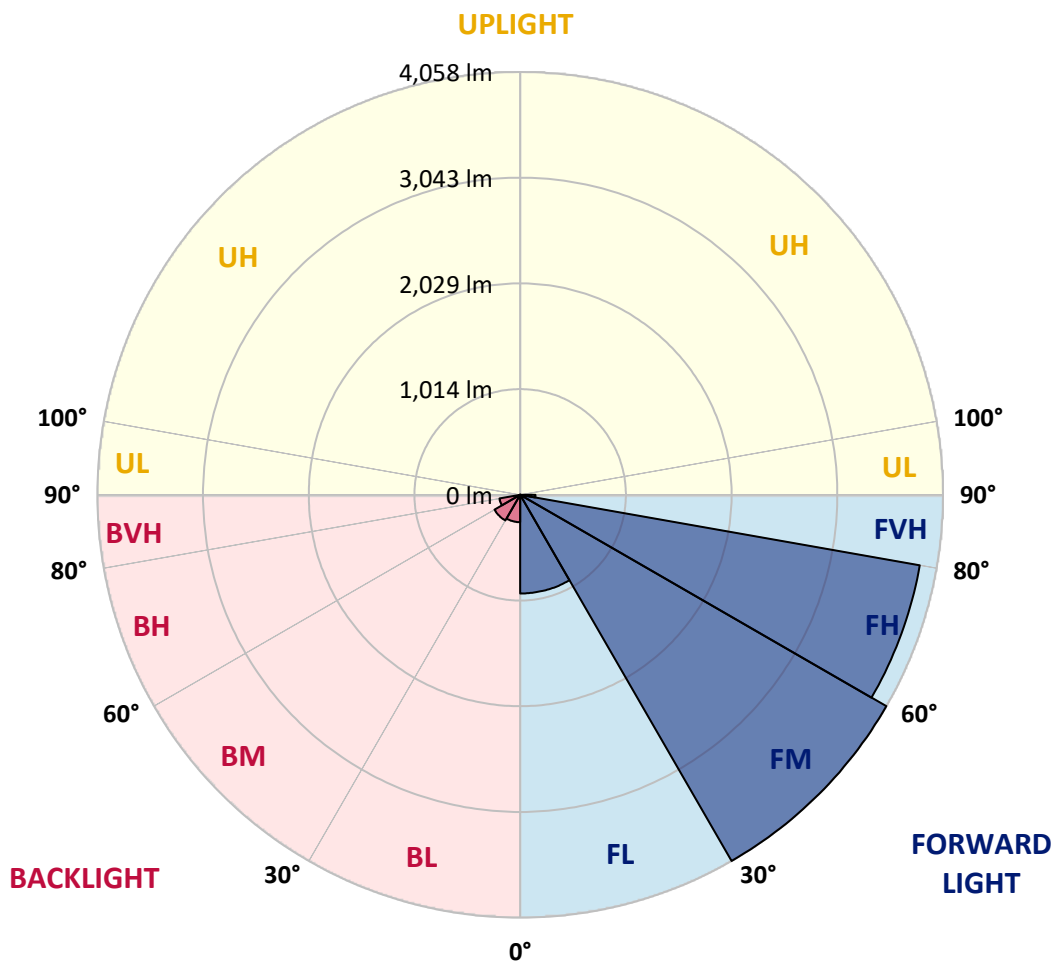
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	947.0	9.7			
FM	(30°-60°)	4057.6	41.4			
FH	(60°-80°)	3893.7	39.7			G2/5000
FVH	(80°-90°)	146.8	1.5			G2/225
BL	(0°-30°)	262.5	2.7	B1/500		
BM	(30°-60°)	284.3	2.9	B1/1000		
BH	(60°-80°)	202.1	2.1	B1/500		G1/500
BVH	(80°-90°)	4.4	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°	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7
2.5°	2800.7	2796.3	2777.8	2774.1	2753.4	2712.0	2664.0	2644.7	2605.5	2543.4	2474.7
5°	2847.2	2849.5	2850.9	2842.8	2839.8	2805.9	2752.6	2729.8	2677.2	2575.2	2449.6
7.5°	2672.8	2678.7	2697.2	2705.4	2740.8	2754.1	2743.1	2728.2	2686.8	2566.4	2389.7
10°	2488.7	2499.9	2519.7	2533.0	2576.7	2612.2	2657.3	2661.0	2652.0	2536.8	2322.5
12.5°	2330.6	2340.9	2363.1	2389.7	2434.1	2479.8	2547.2	2570.8	2600.4	2517.6	2274.3
15°	2194.6	2197.5	2218.9	2252.2	2310.7	2373.4	2453.3	2488.1	2545.6	2510.2	2237.4
17.5°	2075.6	2076.3	2090.3	2120.6	2191.6	2274.3	2367.5	2413.3	2486.5	2499.9	2204.9
20°	1997.2	1996.5	1997.2	2013.4	2076.3	2174.6	2287.7	2335.8	2429.6	2487.3	2171.6
22.5°	1970.6	1966.8	1950.0	1943.9	1983.9	2070.4	2205.6	2268.4	2378.6	2483.6	2147.3
25°	2003.2	2000.9	1964.7	1930.7	1934.3	1988.3	2122.2	2199.0	2338.7	2496.9	2141.4
27.5°	2108.0	2103.7	2048.2	1981.6	1939.6	1949.1	2060.1	2140.6	2306.9	2529.4	2149.4
30°	2245.6	2246.3	2187.2	2106.6	2007.5	1952.9	2026.8	2102.9	2285.4	2578.2	2167.1
32.5°	2398.6	2397.8	2355.7	2262.5	2136.1	2020.9	2041.5	2105.9	2288.4	2649.9	2201.2
35°	2556.7	2548.6	2534.6	2452.6	2304.8	2139.9	2108.8	2156.1	2319.5	2744.5	2258.8
37.5°	2739.3	2736.4	2750.4	2664.0	2513.2	2315.1	2227.0	2258.8	2397.8	2884.2	2352.1
40°	3029.8	3013.6	3020.2	2902.7	2748.2	2550.8	2392.7	2400.8	2522.8	3069.0	2499.1
42.5°	3583.4	3517.6	3394.2	3174.0	3007.0	2812.5	2609.2	2595.2	2699.4	3293.0	2692.8
45°	4244.9	4169.6	3858.4	3473.4	3265.6	3093.3	2876.8	2839.1	2916.6	3559.7	2942.6
47.5°	4797.1	4715.8	4303.4	3786.0	3528.7	3383.1	3173.2	3128.8	3176.9	3869.5	3242.7
50°	4985.6	4940.4	4578.3	4046.2	3794.1	3708.4	3545.0	3471.0	3482.8	4203.6	3593.0
52.5°	4899.1	4883.6	4641.2	4224.3	4039.6	4067.6	3952.2	3874.7	3861.3	4568.7	3980.4
55°	4716.6	4709.2	4590.8	4323.3	4256.0	4396.5	4523.7	4456.3	4330.7	4956.8	4300.5
57.5°	4455.6	4483.8	4568.7	4514.0	4522.1	4743.9	5054.4	5089.1	4901.4	5265.8	4537.6
60°	3758.6	3834.0	4223.5	4718.8	5097.9	5321.9	5622.8	5687.8	5384.8	5477.1	4811.9
62.5°	2778.5	2886.4	3441.5	4351.5	5415.1	6421.0	6378.9	6350.1	5846.0	5760.2	5310.9
65°	1632.0	1758.4	2227.8	3400.1	4936.9	7127.7	7790.7	7391.6	6548.9	6348.6	6105.4
67.5°	813.1	813.8	1026.0	1794.7	3648.5	6634.7	9851.5	9620.9	8043.5	7215.7	6418.9
70°	625.3	642.3	759.2	1043.0	1845.0	5167.4	10323.8	11270.6	9545.4	7177.2	5446.1
72.5°	530.0	541.1	675.6	907.7	1379.3	2836.9	8937.2	9962.4	9108.6	6064.0	4014.4
75°	381.5	390.3	597.9	823.4	1269.9	1407.4	6130.5	7388.6	6834.2	4265.7	2209.3
77.5°	94.6	93.9	208.4	668.2	1136.1	1172.4	3517.6	4738.0	3921.2	1746.6	567.7
80°	42.2	40.7	47.3	140.4	1057.0	1106.5	1547.0	2392.7	1504.2	283.1	173.7
82.5°	29.6	28.1	29.6	51.8	353.4	1026.7	935.0	1037.1	550.6	96.8	74.0
85°	9.7	8.8	16.3	43.6	99.1	592.0	912.1	774.6	409.5	41.4	49.5
87.5°	1.5	1.5	5.9	23.6	28.9	197.3	535.2	536.7	184.1	24.4	22.2
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°	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7	2477.7
2.5°	2440.0	2396.4	2335.0	2273.6	2218.2	2161.2	2115.5	2094.1	2084.4	2071.1	2042.3
5°	2383.8	2304.8	2170.2	2037.9	1914.4	1796.1	1694.9	1637.2	1575.2	1572.2	1541.8
7.5°	2293.6	2181.3	1969.1	1763.7	1575.2	1394.8	1239.5	1139.0	1070.3	1027.5	997.9
10°	2193.1	2048.9	1768.1	1479.1	1222.6	981.5	782.1	651.9	572.8	532.9	510.0
12.5°	2113.3	1932.1	1569.9	1206.3	884.8	608.3	422.9	328.3	286.0	269.8	262.4
15°	2044.5	1824.9	1384.5	962.3	590.5	349.6	244.6	213.6	206.9	206.9	206.2
17.5°	1975.1	1721.5	1204.0	722.9	371.8	229.1	193.0	188.5	189.2	191.4	191.4
20°	1909.2	1623.1	1030.5	515.1	243.9	183.3	175.2	173.7	175.9	178.8	178.1
22.5°	1856.0	1536.7	867.7	354.1	187.7	166.3	161.1	159.0	160.4	162.6	161.9
25°	1818.3	1462.8	718.5	246.9	163.4	151.6	145.7	142.7	141.2	142.7	141.9
27.5°	1795.4	1400.7	578.0	185.5	146.4	136.8	129.4	123.5	119.7	119.7	118.2
30°	1780.6	1342.4	453.1	153.7	132.3	122.0	111.7	103.5	97.6	96.0	95.4
32.5°	1780.0	1292.1	338.4	136.0	119.0	107.2	94.6	84.2	77.6	76.2	75.4
35°	1798.4	1251.3	249.1	122.7	107.2	93.1	79.1	68.0	62.1	62.1	61.4
37.5°	1846.4	1227.7	188.5	112.3	97.6	81.3	66.5	56.2	51.1	52.5	52.5
40°	1935.8	1223.2	153.7	104.3	89.5	70.9	54.0	45.8	43.6	45.8	45.8
42.5°	2072.6	1246.9	136.8	98.4	82.1	60.6	45.2	39.3	38.5	40.7	40.7
45°	2250.7	1293.5	127.2	93.1	74.0	50.3	37.7	34.0	33.3	36.2	36.2
47.5°	2466.5	1356.4	118.2	87.2	65.8	41.4	31.8	28.9	28.9	31.8	32.6
50°	2722.3	1441.3	109.4	81.3	59.1	34.8	26.7	24.4	25.1	28.1	28.9
52.5°	3016.5	1545.6	101.3	76.2	51.8	28.1	22.2	20.6	21.5	24.4	25.1
55°	3270.0	1636.4	91.7	70.9	42.2	23.0	18.5	17.7	18.5	22.2	22.2
57.5°	3491.1	1723.7	82.8	62.9	33.3	18.5	14.7	14.7	16.3	20.0	20.6
60°	3784.5	1861.2	75.4	53.2	25.1	14.1	11.8	12.6	14.7	17.7	18.5
62.5°	4304.2	2094.7	65.8	44.4	18.5	11.0	9.7	10.4	13.3	17.1	17.7
65°	4954.6	2315.8	54.7	36.9	14.1	8.0	7.4	9.7	13.3	17.1	17.7
67.5°	4888.0	2014.2	42.8	29.6	10.4	6.7	5.9	8.8	12.6	17.1	17.7
70°	3964.2	1411.7	31.8	20.0	8.0	5.9	5.9	8.8	12.6	16.3	17.1
72.5°	2749.6	785.7	24.4	13.3	7.4	5.9	5.1	8.0	11.8	16.3	17.1
75°	1308.3	240.9	19.2	9.7	6.7	5.1	4.5	8.0	11.8	16.3	17.1
77.5°	251.3	61.4	15.6	8.0	5.9	5.1	4.5	7.4	11.8	15.6	16.3
80°	85.0	27.4	12.6	7.4	5.9	5.1	4.5	7.4	11.0	14.7	15.6
82.5°	46.6	15.6	11.0	6.7	5.9	4.5	3.8	6.7	10.4	14.7	15.6
85°	36.2	11.0	8.8	6.7	5.9	4.5	3.8	6.7	10.4	14.1	14.7
87.5°	18.5	8.0	7.4	6.7	5.9	4.5	3.8	5.9	9.7	13.3	14.7
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)