

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: P196540

Luminaire Tested: **NAV-AF-04-D-UNV-SL2-7030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196540  
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-04-D-UNV-SL2-7030-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 615mA 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: 12681.7 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-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

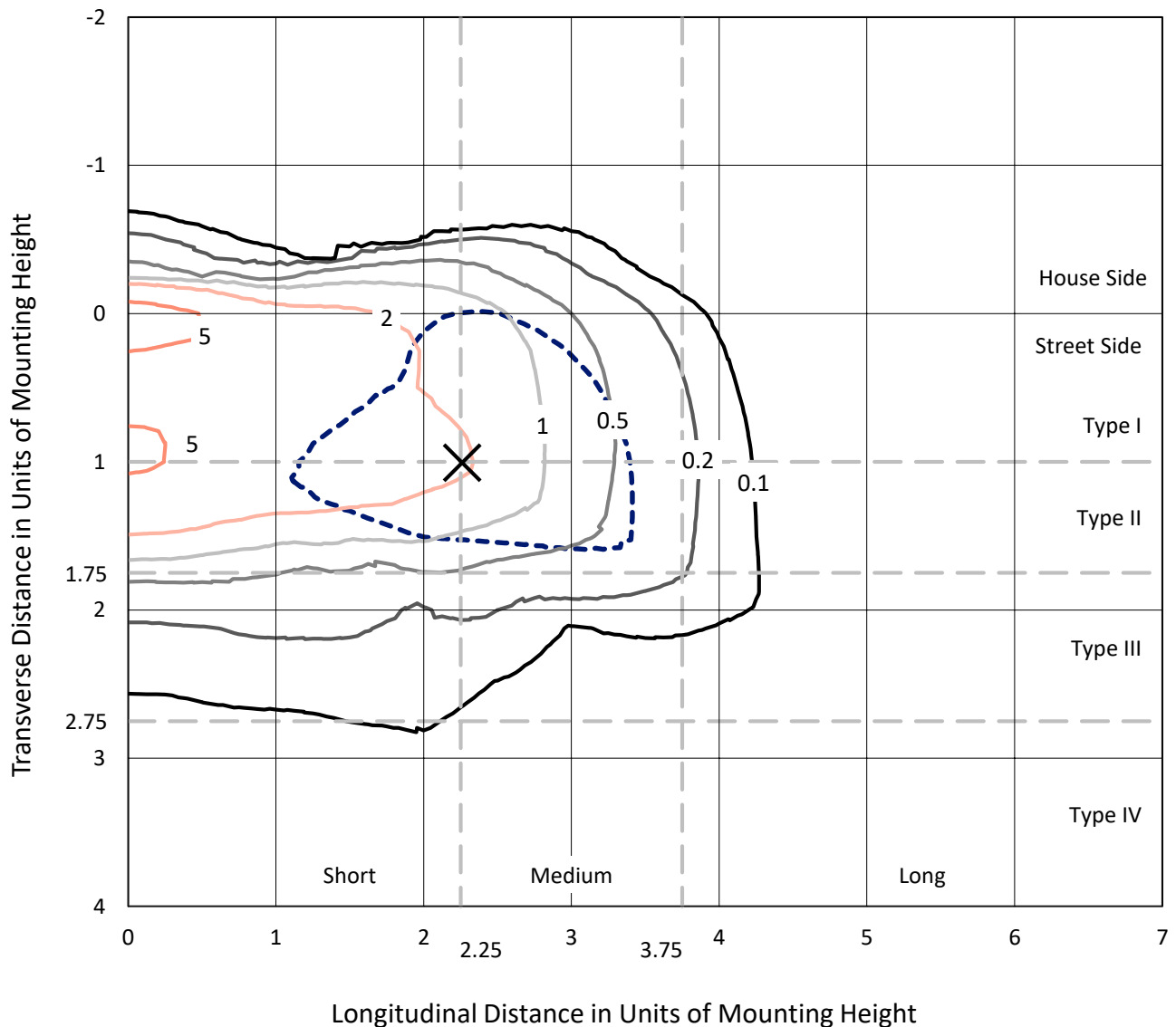


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

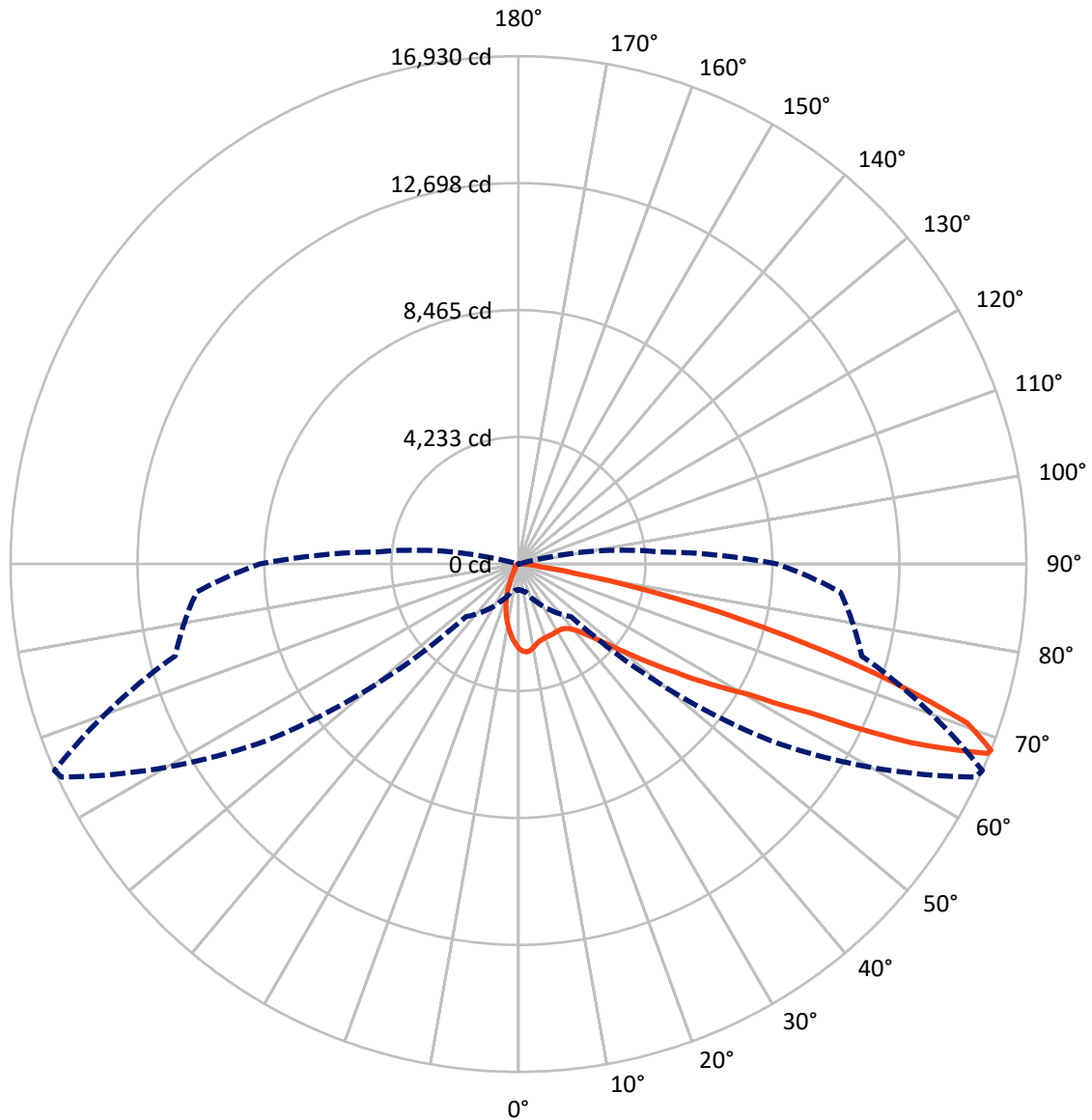


Based on 20 foot mounting height. Maximum calculated value = 7.1 fc  
 Type II - Medium - Semi-Cutoff

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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	1284.5	0.0	1284.5
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	11397.2	0.0	11397.2
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	12681.7	0.0	12681.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	231.6	1.8
10°-20°	498.4	3.9
20°-30°	722.2	5.7
30°-40°	1105.5	8.7
40°-50°	1890.9	14.9
50°-60°	2957.9	23.3
60°-70°	3405.9	26.9
70°-80°	1704.4	13.4
80°-90°	165.1	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°	12681.7	100.0
0°-180°	12681.7	100.0

**Coefficient of Utilization**



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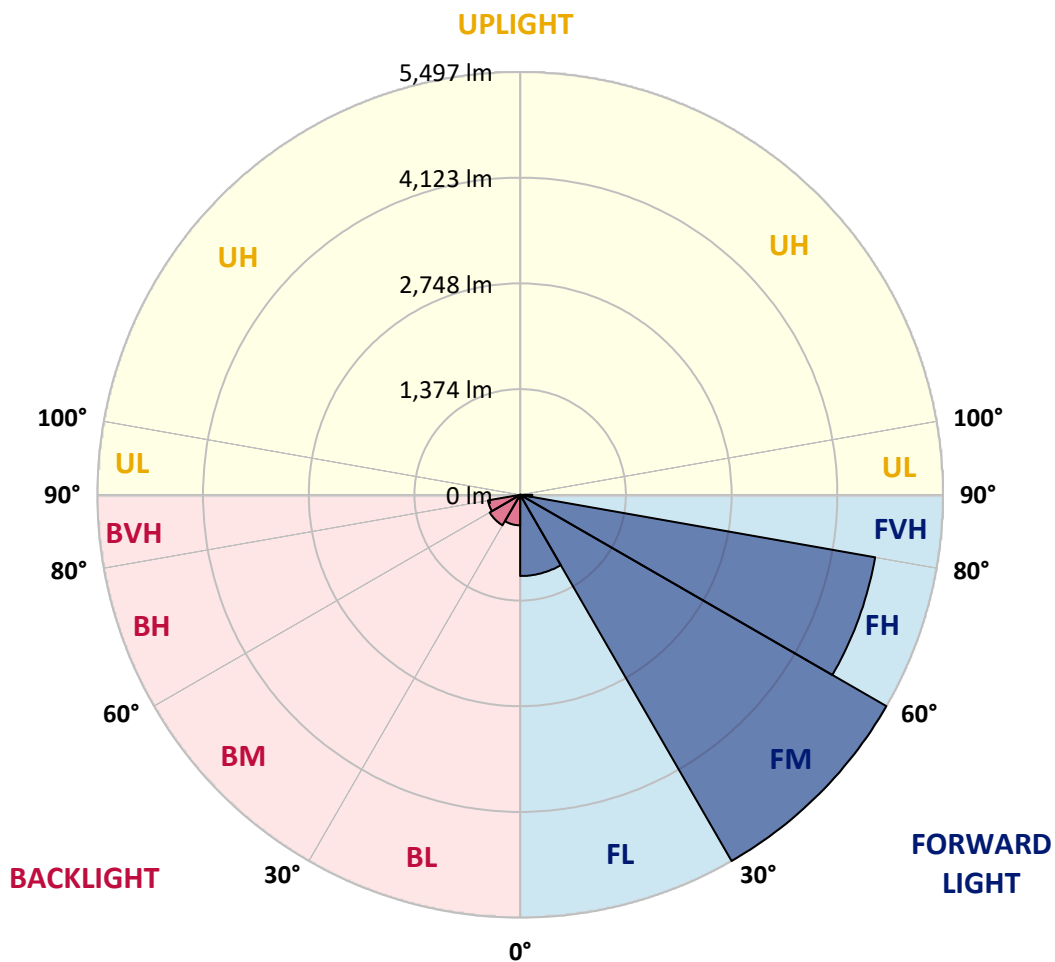
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1055.7	8.3			
FM (30°-60°)	5496.8	43.3			
FH (60°-80°)	4685.9	36.9			G2/5000
FVH (80°-90°)	158.8	1.3			G2/225
BL (0°-30°)	396.5	3.1	B1/500		
BM (30°-60°)	457.4	3.6	B1/1000		
BH (60°-80°)	424.4	3.3	B1/500		G1/500
BVH (80°-90°)	6.3	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°	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3
2.5°	2971.8	2973.7	2972.7	2975.6	2973.7	2958.7	2942.8	2909.0	2912.0	2868.2	2819.4
5°	2762.6	2779.5	2796.5	2813.4	2854.3	2890.1	2932.8	2942.8	2942.8	2904.9	2833.3
7.5°	2549.6	2550.5	2569.6	2592.4	2647.2	2712.9	2812.5	2902.0	2904.0	2914.0	2835.3
10°	2389.3	2394.3	2407.2	2432.1	2486.8	2551.6	2663.0	2803.5	2814.4	2888.0	2815.4
12.5°	2264.8	2270.9	2284.8	2313.7	2363.4	2430.2	2547.6	2707.9	2722.8	2863.2	2809.5
15°	2169.4	2177.3	2188.3	2217.1	2270.9	2341.5	2470.0	2644.2	2662.1	2853.2	2828.4
17.5°	2129.5	2129.5	2128.5	2148.4	2202.1	2273.8	2408.2	2610.3	2633.2	2861.2	2860.2
20°	2146.4	2143.4	2122.5	2117.6	2150.3	2222.2	2359.5	2588.5	2614.3	2876.1	2899.0
22.5°	2236.0	2230.0	2183.2	2144.4	2134.5	2182.2	2326.5	2573.5	2604.3	2907.0	2950.8
25°	2426.1	2408.2	2343.5	2255.8	2177.3	2172.3	2303.7	2565.5	2598.4	2942.8	3007.6
27.5°	2673.0	2668.1	2564.6	2447.1	2295.7	2205.2	2296.7	2559.5	2592.4	2968.7	3053.4
30°	2979.7	2981.6	2862.1	2708.9	2479.9	2297.7	2318.6	2556.5	2590.4	2970.8	3073.3
32.5°	3296.3	3298.2	3198.7	3034.4	2731.8	2457.0	2380.3	2570.6	2601.4	2962.8	3072.3
35°	3600.8	3603.9	3544.2	3411.7	3068.3	2678.1	2496.8	2618.3	2640.2	2967.7	3070.3
37.5°	3986.3	3998.2	3924.5	3801.0	3490.4	3002.6	2687.0	2714.9	2732.8	3008.6	3085.2
40°	4643.2	4627.3	4416.3	4207.1	3948.3	3397.9	2961.8	2881.1	2887.0	3114.1	3142.0
42.5°	5408.8	5388.8	5027.6	4667.1	4419.2	3874.7	3313.2	3136.0	3134.9	3291.3	3265.4
45°	6067.8	6055.9	5675.6	5194.7	4940.9	4401.3	3746.3	3503.3	3491.4	3597.9	3490.4
47.5°	6535.8	6525.8	6238.1	5756.3	5544.3	4980.7	4286.8	4004.2	3979.2	3999.1	3855.8
50°	6581.6	6570.7	6470.2	6160.5	6249.1	5830.9	4954.8	4660.1	4628.3	4597.4	4408.3
52.5°	6153.5	6152.5	6205.3	6185.3	6742.8	6925.1	5774.2	5471.4	5433.7	5355.1	5166.9
55°	5278.5	5273.4	5473.6	5764.2	6731.9	8053.9	7023.6	6437.2	6387.4	6230.2	5983.2
57.5°	3856.8	3830.8	4249.0	4865.2	6259.0	8547.8	9007.8	7636.9	7554.1	7055.4	6675.2
60°	2129.5	2139.4	2677.1	3406.8	5139.0	8450.2	10833.6	9035.6	8818.6	7767.2	7384.0
62.5°	1193.6	1218.6	1618.7	2214.1	3276.3	7658.7	11813.2	11442.8	10920.1	8597.6	8280.0
65°	902.9	917.9	1119.1	1708.4	2065.8	5352.1	11969.5	14808.8	14357.8	9855.9	9706.6
67.5°	850.1	862.2	960.7	1416.6	1881.6	2775.6	10792.7	16799.9	16856.6	11572.3	10811.6
68°	856.1	871.2	969.6	1362.9	1878.6	2482.9	10291.0	16809.9	16930.3	11849.0	10773.8
70°	786.4	790.5	1025.4	1337.0	1820.8	1956.3	7444.7	15658.0	15874.1	12178.6	9780.3
72.5°	300.7	301.7	460.0	1157.8	1907.4	1967.2	3750.3	12375.7	12386.6	10598.5	7624.8
75°	156.3	131.4	144.3	362.4	1821.9	1917.4	1881.6	8450.2	8397.4	7168.0	4672.2
77.5°	107.5	91.6	96.5	125.4	757.6	1916.4	1358.9	4859.3	4848.3	3049.3	1333.1
80°	60.7	52.8	57.7	105.6	265.8	1799.0	1266.4	2088.7	1968.2	535.6	216.0
82.5°	30.8	25.9	30.8	88.6	165.3	1131.9	1231.5	819.3	729.8	127.4	140.4
85°	7.9	7.9	15.0	61.7	102.6	371.4	1104.1	591.3	531.6	55.7	99.5
87.5°	1.9	1.0	6.0	23.0	36.8	80.7	612.3	329.5	283.7	28.9	57.7
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°	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3	2825.3
2.5°	2799.4	2771.6	2716.8	2655.1	2611.3	2563.5	2535.7	2501.8	2476.0	2453.0	2470.0
5°	2789.5	2735.8	2614.3	2477.9	2363.4	2253.9	2172.3	2094.6	2035.9	1999.1	2013.9
7.5°	2763.6	2684.0	2486.8	2273.8	2086.7	1910.5	1767.0	1638.7	1539.1	1485.4	1502.4
10°	2719.8	2607.4	2342.5	2046.9	1785.0	1536.1	1323.1	1131.9	987.6	919.9	935.8
12.5°	2688.0	2539.6	2193.2	1827.8	1483.4	1130.0	847.2	628.2	515.7	448.0	454.0
15°	2674.0	2486.8	2053.8	1596.9	1153.9	725.8	457.9	331.5	292.7	278.7	279.7
17.5°	2676.1	2445.1	1921.5	1356.9	821.3	417.2	280.8	252.8	246.9	243.8	243.8
20°	2681.0	2403.2	1783.9	1107.1	525.6	268.8	234.0	225.0	222.1	218.0	219.1
22.5°	2696.0	2371.4	1645.7	856.1	323.5	219.1	207.0	199.1	194.2	188.2	189.1
25°	2718.8	2347.6	1509.2	616.2	228.1	191.1	180.2	169.3	160.3	153.3	154.3
27.5°	2732.8	2313.7	1363.9	420.1	189.1	167.2	152.3	137.3	127.4	121.5	120.5
30°	2722.8	2258.9	1198.7	275.8	167.2	144.3	126.4	109.5	99.5	94.6	94.6
32.5°	2696.0	2188.3	1016.4	201.1	148.4	124.4	102.6	87.6	80.7	77.7	78.6
35°	2665.1	2114.5	822.2	170.2	133.4	105.6	83.6	71.7	68.8	67.7	67.7
37.5°	2648.1	2050.8	636.1	154.3	119.4	87.6	68.8	61.7	58.8	58.8	58.8
40°	2667.1	2002.0	470.9	142.4	105.6	72.6	57.7	52.8	51.8	51.8	51.8
42.5°	2747.8	1985.1	344.5	132.4	91.6	60.7	49.8	45.8	44.8	45.8	45.8
45°	2904.9	2022.0	260.8	122.5	78.6	49.8	42.8	39.8	39.8	40.9	40.9
47.5°	3171.8	2116.6	214.0	112.5	65.7	41.8	36.8	34.9	34.9	35.8	35.8
50°	3586.0	2291.7	192.2	101.5	54.7	35.8	30.8	29.8	29.8	30.8	31.9
52.5°	4215.1	2625.3	181.2	90.5	44.8	29.8	25.9	24.9	25.9	26.9	26.9
55°	4915.0	3052.3	168.3	79.6	37.8	24.9	20.9	20.9	21.9	23.9	23.9
57.5°	5567.1	3464.5	156.3	65.7	32.9	19.8	16.9	16.9	18.9	20.9	20.9
60°	6256.0	3868.7	140.4	52.8	27.9	16.0	13.9	13.9	16.9	18.9	19.8
62.5°	7107.2	4338.5	119.4	41.8	21.9	11.9	10.0	12.9	16.0	18.9	18.9
65°	8337.7	4923.0	93.6	32.9	16.9	9.0	7.9	11.9	15.0	17.9	18.9
67.5°	8784.8	4848.3	70.7	26.9	12.9	7.0	7.0	10.9	15.0	17.9	17.9
68°	8621.4	4685.0	67.7	25.9	11.9	7.0	7.0	10.9	15.0	17.9	17.9
70°	7512.4	3829.9	55.7	19.8	10.0	6.0	6.0	10.0	15.0	16.9	17.9
72.5°	5624.8	2544.6	47.7	12.9	9.0	6.0	5.0	10.0	13.9	16.9	16.9
75°	3226.5	1056.3	40.9	10.0	7.9	5.0	5.0	9.0	13.9	16.9	16.9
77.5°	911.9	246.9	32.9	7.9	7.0	5.0	4.0	9.0	12.9	16.0	16.0
80°	167.2	73.6	25.9	7.0	6.0	5.0	4.0	9.0	12.9	16.0	16.0
82.5°	110.5	34.9	18.9	7.0	6.0	5.0	4.0	7.9	11.9	15.0	15.0
85°	82.6	24.9	11.9	7.0	6.0	5.0	4.0	7.9	11.9	15.0	15.0
87.5°	45.8	10.9	9.0	7.9	7.0	5.0	4.0	7.0	10.9	13.9	13.9
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)