

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: P197068

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-8030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197068
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-04-D-UNV-SL3-8030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 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: 11134 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - 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

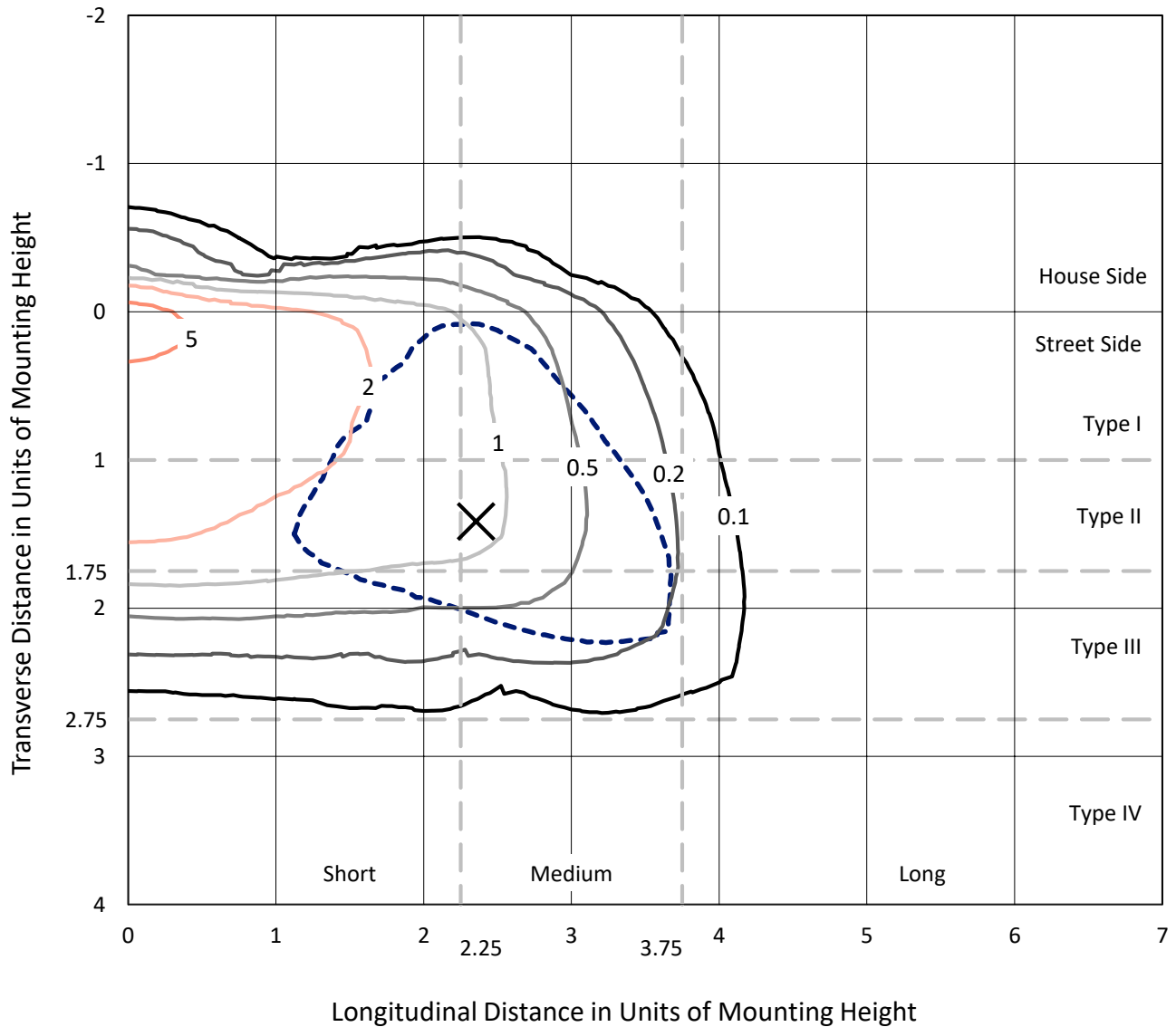


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

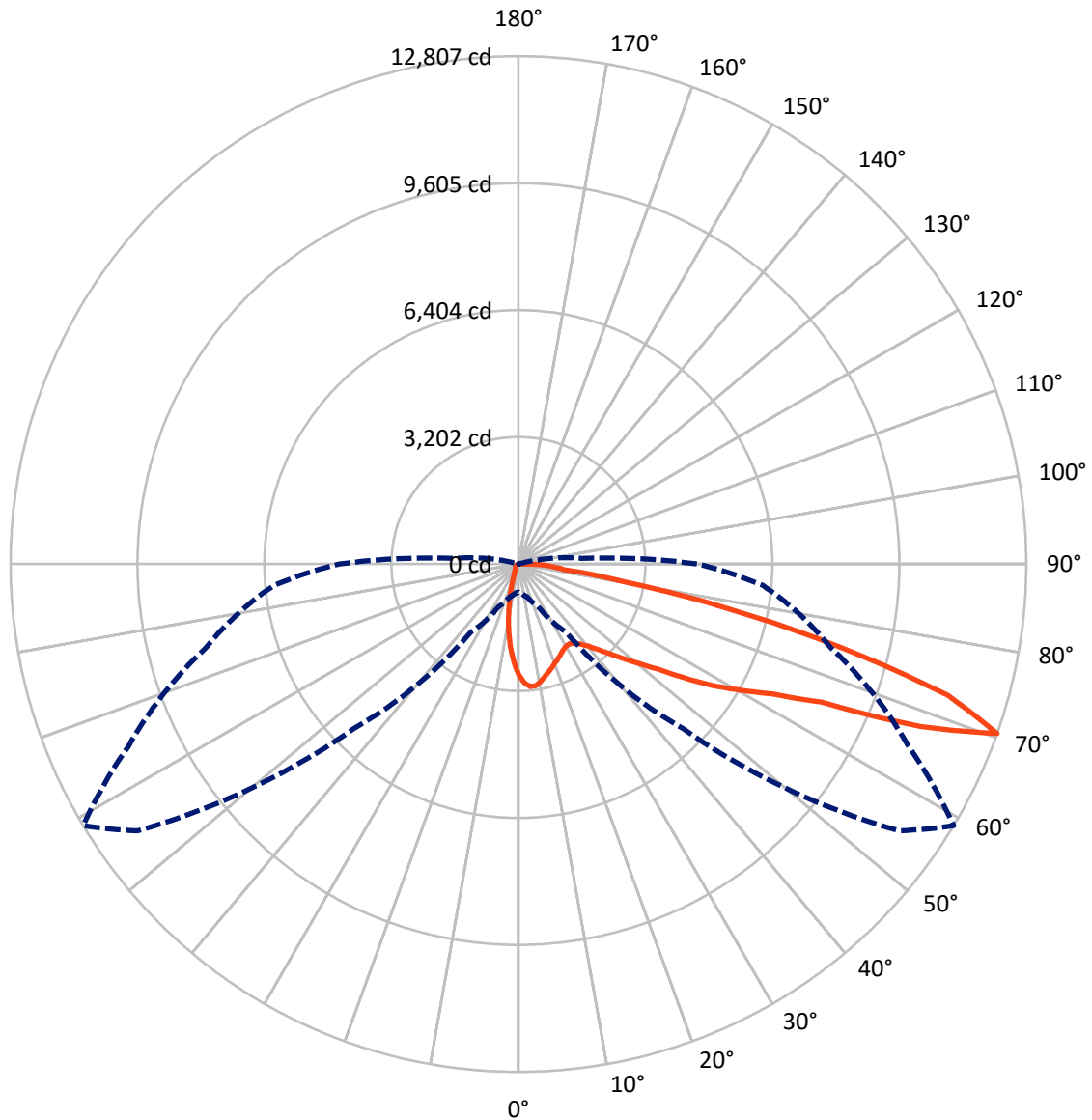


Based on 20 foot mounting height. Maximum calculated value = 7.5 fc
 Type III - Medium - Non-Cutoff

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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
House Side	Lumens	855.9	0.0	855.9
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	10278.1	0.0	10278.1
	% Fixture	92.3	0.0	92.3
Total	Lumens	11134.0	0.0	11134.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.5	2.1
10°-20°	485.6	4.4
20°-30°	657.3	5.9
30°-40°	948.6	8.5
40°-50°	1575.4	14.1
50°-60°	2409.8	21.6
60°-70°	2997.2	26.9
70°-80°	1656.8	14.9
80°-90°	171.8	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°	11134.0	100.0
0°-180°	11134.0	100.0

Coefficient of Utilization



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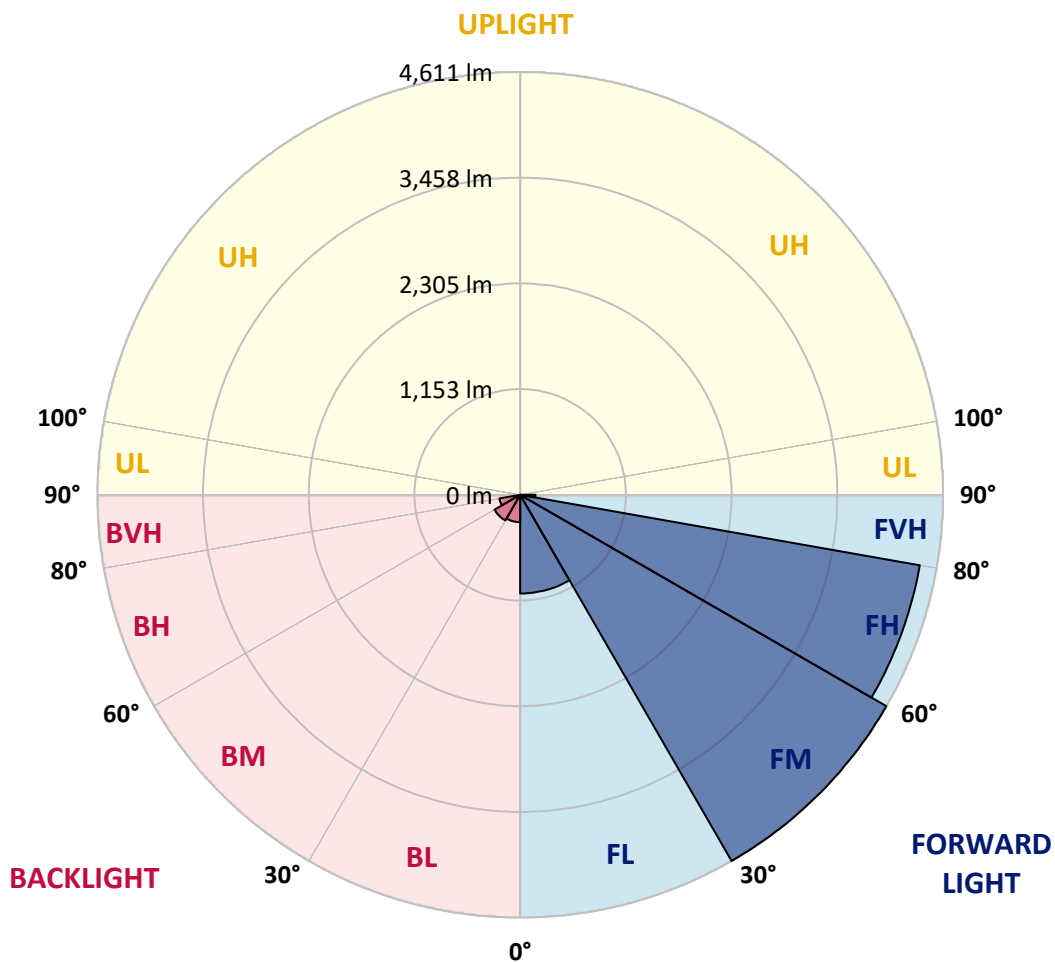
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1076.1	9.7			
FM	(30°-60°)	4610.7	41.4			
FH	(60°-80°)	4424.4	39.7			G2/5000
FVH	(80°-90°)	166.8	1.5			G2/225
BL	(0°-30°)	298.3	2.7	B1/500		
BM	(30°-60°)	323.1	2.9	B1/1000		
BH	(60°-80°)	229.6	2.1	B1/500		G1/500
BVH	(80°-90°)	5.0	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°	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4
2.5°	3182.4	3177.4	3156.4	3152.2	3128.7	3081.6	3027.0	3005.2	2960.7	2890.1	2812.0
5°	3235.3	3237.9	3239.5	3230.3	3226.9	3188.3	3127.8	3101.8	3042.2	2926.3	2783.5
7.5°	3037.1	3043.8	3064.8	3074.1	3114.4	3129.5	3116.9	3100.1	3053.1	2916.2	2715.4
10°	2828.0	2840.6	2863.3	2878.4	2927.9	2968.3	3019.5	3023.7	3013.6	2882.6	2639.0
12.5°	2648.2	2660.0	2685.2	2715.4	2765.8	2817.9	2894.3	2921.2	2954.8	2860.7	2584.4
15°	2493.7	2497.1	2521.4	2559.2	2625.6	2697.0	2787.7	2827.1	2892.7	2852.3	2542.4
17.5°	2358.5	2359.3	2375.3	2409.7	2490.3	2584.4	2690.2	2742.3	2825.5	2840.6	2505.5
20°	2269.4	2268.6	2269.4	2287.9	2359.3	2471.0	2599.5	2654.1	2760.8	2826.3	2467.7
22.5°	2239.2	2235.0	2215.7	2209.0	2254.3	2352.6	2506.3	2577.7	2702.8	2822.1	2439.9
25°	2276.2	2273.6	2232.5	2193.9	2198.1	2259.4	2411.4	2498.7	2657.5	2837.2	2433.2
27.5°	2395.4	2390.4	2327.4	2251.8	2203.9	2214.9	2340.8	2432.4	2621.4	2874.2	2442.5
30°	2551.7	2552.5	2485.3	2393.8	2281.2	2219.0	2303.0	2389.6	2597.0	2929.6	2462.6
32.5°	2725.5	2724.7	2676.8	2571.0	2427.3	2296.3	2319.8	2392.9	2600.4	3011.1	2501.3
35°	2905.3	2896.0	2880.1	2786.8	2618.8	2431.5	2396.3	2450.0	2635.6	3118.6	2566.8
37.5°	3112.7	3109.4	3125.3	3027.0	2855.7	2630.6	2530.7	2566.8	2724.7	3277.3	2672.6
40°	3442.8	3424.3	3431.9	3298.3	3122.8	2898.5	2718.8	2728.0	2866.6	3487.3	2839.7
42.5°	4071.9	3997.1	3856.9	3606.6	3416.8	3195.9	2964.9	2948.9	3067.4	3741.8	3059.8
45°	4823.6	4737.9	4384.3	3946.8	3710.7	3515.0	3268.9	3226.1	3314.3	4045.0	3343.7
47.5°	5451.0	5358.6	4890.0	4302.0	4009.7	3844.3	3605.7	3555.4	3609.9	4396.9	3684.7
50°	5665.2	5614.0	5202.4	4597.7	4311.3	4213.8	4028.2	3944.2	3957.7	4776.6	4082.8
52.5°	5566.9	5549.3	5273.8	4800.1	4590.1	4622.0	4491.0	4402.8	4387.7	5191.5	4522.9
55°	5359.5	5351.1	5216.7	4912.7	4836.2	4995.8	5140.3	5063.8	4921.0	5632.5	4886.6
57.5°	5063.0	5094.9	5191.5	5129.3	5138.6	5390.6	5743.3	5782.8	5569.5	5983.5	5156.2
60°	4271.0	4356.6	4799.3	5362.0	5792.9	6047.4	6389.2	6463.1	6118.8	6223.8	5467.8
62.5°	3157.2	3279.9	3910.6	4944.6	6153.2	7296.3	7248.4	7215.7	6642.9	6545.4	6034.8
65°	1854.5	1998.2	2531.5	3863.6	5609.8	8099.3	8852.7	8399.1	7441.6	7214.0	6937.7
67.5°	923.9	924.7	1165.8	2039.3	4145.8	7539.1	11194.4	10932.3	9139.9	8199.2	7293.8
70°	710.6	729.9	862.6	1185.1	2096.4	5871.8	11731.1	12807.0	10846.6	8155.6	6188.5
72.5°	602.2	614.8	767.7	1031.4	1567.3	3223.6	10155.4	11320.3	10350.2	6890.6	4561.6
75°	433.4	443.5	679.5	935.7	1443.0	1599.2	6966.2	8395.8	7765.8	4847.1	2510.5
77.5°	107.5	106.7	236.9	759.3	1290.9	1332.1	3997.1	5383.8	4455.7	1984.7	645.1
80°	47.9	46.2	53.8	159.6	1201.1	1257.3	1757.9	2718.8	1709.2	321.7	197.4
82.5°	33.6	31.9	33.6	58.8	401.5	1166.6	1062.5	1178.4	625.7	110.0	84.0
85°	10.9	10.1	18.5	49.6	112.5	672.8	1036.5	880.2	465.3	47.0	56.3
87.5°	1.7	1.7	6.7	26.9	32.8	224.3	608.1	609.8	209.1	27.7	25.2
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°	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4	2815.4
2.5°	2772.6	2723.0	2653.3	2583.6	2520.6	2455.9	2403.8	2379.5	2368.6	2353.4	2320.7
5°	2708.7	2618.8	2466.0	2315.6	2175.4	2041.0	1925.9	1860.4	1789.9	1786.5	1752.1
7.5°	2606.2	2478.6	2237.5	2004.0	1789.9	1584.9	1408.5	1294.3	1216.2	1167.5	1133.9
10°	2492.0	2328.2	2009.1	1680.7	1389.2	1115.4	888.6	740.8	650.9	605.6	579.5
12.5°	2401.3	2195.5	1784.0	1370.7	1005.4	691.2	480.4	372.9	325.0	306.6	298.2
15°	2323.2	2073.7	1573.2	1093.6	671.1	397.3	278.0	242.7	235.2	235.2	234.3
17.5°	2244.2	1956.2	1368.2	821.4	422.5	260.4	219.2	214.2	215.0	217.5	217.5
20°	2169.5	1844.4	1170.8	585.4	277.2	208.3	199.1	197.4	199.9	203.3	202.4
22.5°	2109.0	1746.2	986.1	402.3	213.3	189.0	183.1	180.6	182.3	184.8	183.9
25°	2066.2	1662.2	816.4	280.5	185.6	172.2	165.5	162.1	160.4	162.1	161.3
27.5°	2040.1	1591.6	656.8	210.8	166.3	155.4	147.0	140.3	136.1	136.1	134.4
30°	2023.4	1525.3	514.9	174.7	150.3	138.6	126.8	117.6	110.9	109.2	108.3
32.5°	2022.5	1468.2	384.7	154.5	135.2	121.8	107.5	95.8	88.2	86.5	85.7
35°	2043.5	1422.0	283.1	139.4	121.8	105.8	89.9	77.3	70.6	70.6	69.7
37.5°	2098.1	1395.1	214.2	127.7	110.9	92.4	75.6	63.8	58.0	59.6	59.6
40°	2199.7	1390.1	174.7	118.4	101.6	80.6	61.3	52.1	49.6	52.1	52.1
42.5°	2355.1	1416.9	155.4	111.7	93.2	68.9	51.2	44.5	43.7	46.2	46.2
45°	2557.5	1469.8	144.5	105.8	84.0	57.1	42.8	38.6	37.8	41.2	41.2
47.5°	2802.8	1541.2	134.4	99.1	74.8	47.0	36.1	32.8	32.8	36.1	37.0
50°	3093.4	1637.8	124.3	92.4	67.2	39.5	30.2	27.7	28.6	31.9	32.8
52.5°	3427.7	1756.3	115.1	86.5	58.8	31.9	25.2	23.5	24.4	27.7	28.6
55°	3715.8	1859.6	104.1	80.6	47.9	26.0	21.0	20.2	21.0	25.2	25.2
57.5°	3966.9	1958.7	94.1	71.4	37.8	21.0	16.8	16.8	18.5	22.7	23.5
60°	4300.4	2114.9	85.7	60.5	28.6	16.0	13.4	14.3	16.8	20.2	21.0
62.5°	4890.8	2380.3	74.8	50.4	21.0	12.6	10.9	11.8	15.1	19.3	20.2
65°	5629.9	2631.4	62.2	42.0	16.0	9.2	8.4	10.9	15.1	19.3	20.2
67.5°	5554.3	2288.8	48.7	33.6	11.8	7.6	6.7	10.1	14.3	19.3	20.2
70°	4504.5	1604.2	36.1	22.7	9.2	6.7	6.7	10.1	14.3	18.5	19.3
72.5°	3124.5	892.8	27.7	15.1	8.4	6.7	5.9	9.2	13.4	18.5	19.3
75°	1486.6	273.8	21.8	10.9	7.6	5.9	5.0	9.2	13.4	18.5	19.3
77.5°	285.6	69.7	17.6	9.2	6.7	5.9	5.0	8.4	13.4	17.6	18.5
80°	96.6	31.1	14.3	8.4	6.7	5.9	5.0	8.4	12.6	16.8	17.6
82.5°	52.9	17.6	12.6	7.6	6.7	5.0	4.2	7.6	11.8	16.8	17.6
85°	41.2	12.6	10.1	7.6	6.7	5.0	4.2	7.6	11.8	16.0	16.8
87.5°	21.0	9.2	8.4	7.6	6.7	5.0	4.2	6.7	10.9	15.1	16.8
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)