

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: P196593

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196593
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-SL3-7030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 800mA 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: 12016.3 lumens
Efficiency: N/A
Efficacy: 96.9 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): 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

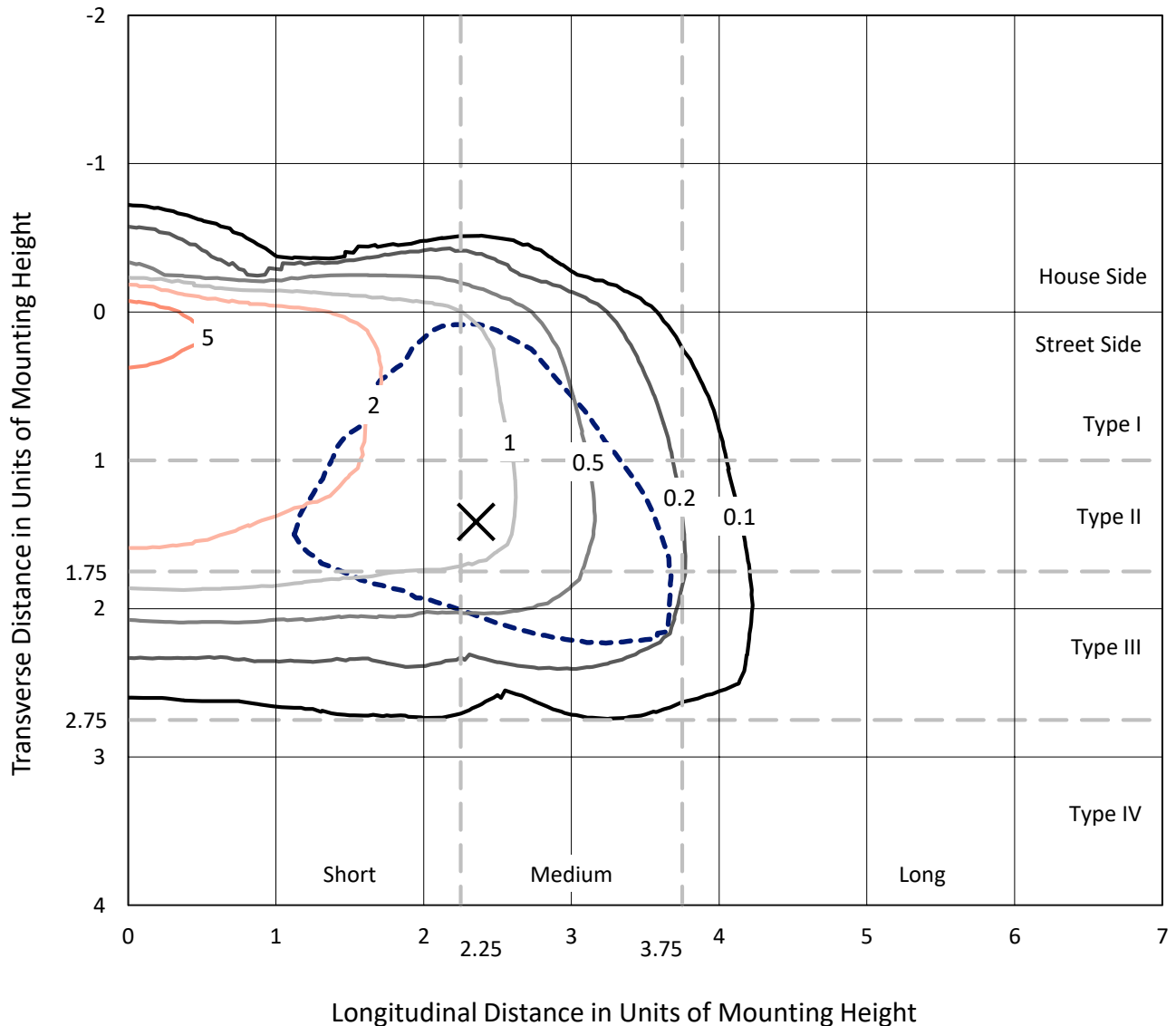


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Iso-Footcandle Lines of Horizontal Illumination

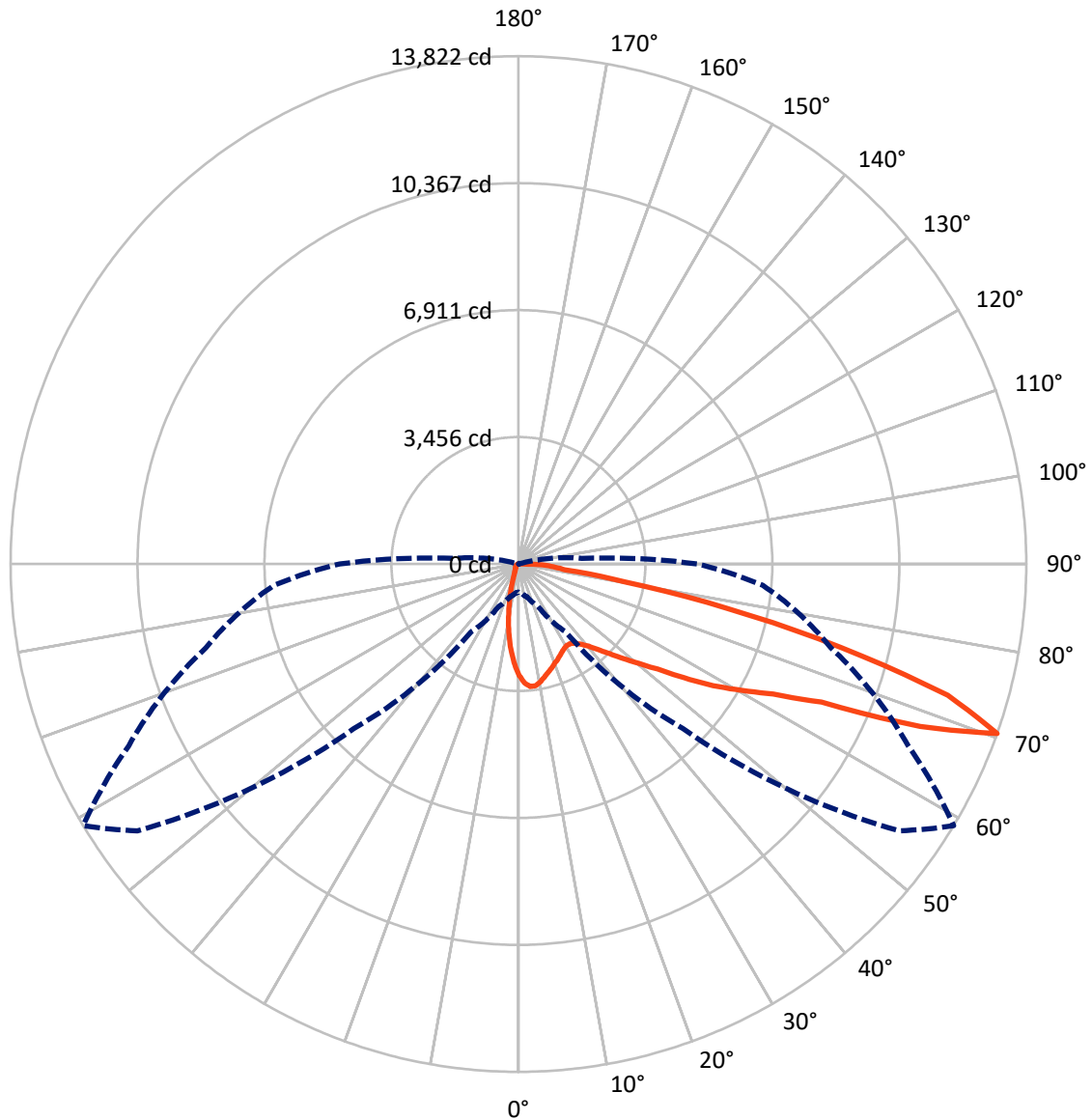
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.1 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	923.7	0.0	923.7
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	11092.6	0.0	11092.6
	% Fixture	92.3	0.0	92.3
Total	Lumens	12016.3	0.0	12016.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.9	2.1
10°-20°	524.1	4.4
20°-30°	709.4	5.9
30°-40°	1023.8	8.5
40°-50°	1700.3	14.1
50°-60°	2600.7	21.6
60°-70°	3234.7	26.9
70°-80°	1788.1	14.9
80°-90°	185.4	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°	12016.3	100.0
0°-180°	12016.3	100.0



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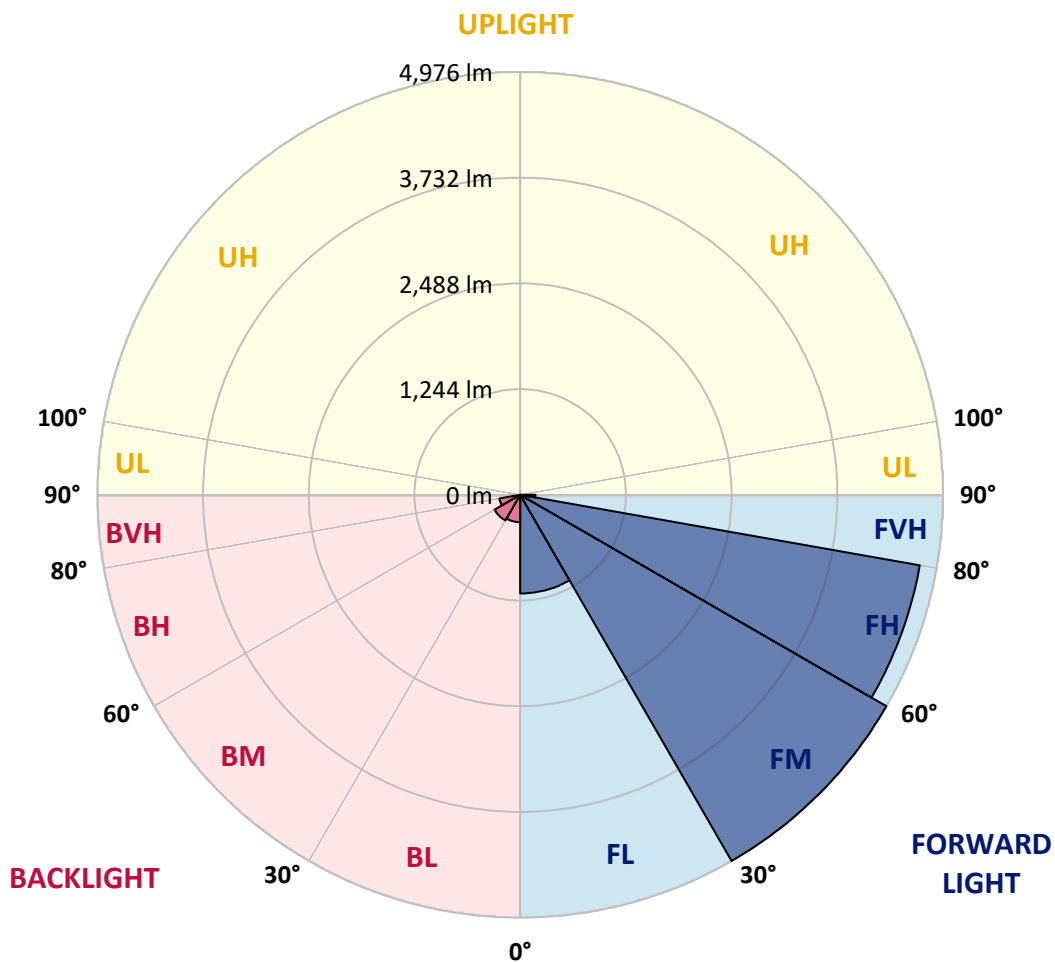
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1161.4	9.7			
FM	(30°-60°)	4976.1	41.4			
FH	(60°-80°)	4775.0	39.7			G2/5000
FVH	(80°-90°)	180.1	1.5			G2/225
BL	(0°-30°)	321.9	2.7	B1/500		
BM	(30°-60°)	348.7	2.9	B1/1000		
BH	(60°-80°)	247.8	2.1	B1/500		G1/500
BVH	(80°-90°)	5.4	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°	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5
2.5°	3434.7	3429.2	3406.4	3402.0	3376.6	3325.9	3267.0	3243.4	3195.3	3119.2	3034.9
5°	3491.7	3494.4	3496.3	3486.3	3482.6	3441.0	3375.7	3347.6	3283.2	3158.1	3004.1
7.5°	3277.8	3285.1	3307.8	3317.6	3361.3	3377.5	3363.9	3345.8	3295.0	3147.3	2930.7
10°	3052.0	3065.7	3090.2	3106.5	3160.0	3203.5	3258.7	3263.3	3252.4	3111.0	2848.2
12.5°	2858.1	2870.8	2898.0	2930.7	2985.0	3041.2	3123.7	3152.6	3189.0	3087.4	2789.2
15°	2691.3	2695.0	2721.2	2762.1	2833.6	2910.6	3008.6	3051.2	3121.9	3078.4	2743.9
17.5°	2545.4	2546.3	2563.5	2600.7	2687.7	2789.2	2903.4	2959.7	3049.4	3065.7	2704.0
20°	2449.3	2448.4	2449.3	2469.3	2546.3	2666.8	2805.6	2864.4	2979.6	3050.3	2663.2
22.5°	2416.7	2412.1	2391.2	2384.0	2432.9	2539.0	2704.9	2782.0	2917.0	3045.7	2633.2
25°	2456.5	2453.9	2409.3	2367.7	2372.2	2438.4	2602.4	2696.7	2868.0	3062.1	2626.0
27.5°	2585.3	2579.8	2511.9	2430.3	2378.6	2390.4	2526.3	2625.2	2829.0	3102.0	2636.0
30°	2753.9	2754.8	2682.2	2583.4	2461.9	2394.9	2485.5	2578.9	2802.8	3161.8	2657.7
32.5°	2941.5	2940.6	2889.0	2774.7	2619.7	2478.3	2503.6	2582.6	2806.5	3249.7	2699.5
35°	3135.5	3125.5	3108.3	3007.7	2826.4	2624.2	2586.1	2644.2	2844.6	3365.7	2770.2
37.5°	3359.4	3355.8	3373.0	3267.0	3081.9	2839.1	2731.2	2770.2	2940.6	3537.0	2884.5
40°	3715.6	3695.7	3703.9	3559.6	3370.3	3128.2	2934.2	2944.2	3093.7	3763.7	3064.8
42.5°	4394.6	4313.9	4162.6	3892.4	3687.5	3449.1	3199.8	3182.6	3310.4	4038.3	3302.3
45°	5205.8	5113.5	4731.8	4259.5	4004.8	3793.6	3528.0	3481.8	3576.9	4365.6	3608.8
47.5°	5883.1	5783.3	5277.4	4643.0	4327.5	4148.9	3891.5	3837.0	3896.0	4745.3	3976.7
50°	6114.1	6058.9	5614.8	4962.0	4653.0	4547.8	4347.4	4256.8	4271.3	5155.1	4406.3
52.5°	6008.0	5989.0	5691.8	5180.5	4954.0	4988.3	4847.0	4751.6	4735.4	5603.0	4881.3
55°	5784.1	5775.1	5630.1	5302.0	5219.5	5391.7	5547.6	5465.1	5311.0	6078.8	5273.8
57.5°	5464.3	5498.7	5603.0	5535.8	5545.8	5817.7	6198.5	6241.1	6010.8	6457.8	5564.8
60°	4609.4	4701.9	5179.6	5786.9	6252.0	6526.6	6895.6	6975.3	6603.6	6716.9	5901.1
62.5°	3407.5	3539.8	4220.5	5336.4	6640.8	7874.6	7822.9	7787.6	7169.3	7064.1	6513.1
65°	2001.5	2156.4	2732.1	4169.8	6054.4	8741.1	9554.1	9064.7	8031.3	7785.7	7487.4
67.5°	997.1	998.0	1258.2	2200.9	4474.3	8136.5	12081.5	11798.7	9864.3	8849.0	7871.8
70°	766.9	787.8	931.0	1279.0	2262.5	6337.1	12660.8	13822.0	11706.1	8801.8	6678.9
72.5°	650.0	663.5	828.5	1113.2	1691.5	3479.1	10960.2	12217.5	11170.4	7436.7	4923.0
75°	467.7	478.7	733.3	1009.8	1557.3	1726.0	7518.2	9061.1	8381.3	5231.3	2709.4
77.5°	116.1	115.2	255.6	819.5	1393.3	1437.7	4313.9	5810.5	4808.8	2142.0	696.2
80°	51.7	49.8	58.0	172.2	1296.3	1357.0	1897.3	2934.2	1844.7	347.2	213.0
82.5°	36.3	34.4	36.3	63.5	433.3	1259.1	1146.6	1271.8	675.3	118.8	90.6
85°	11.8	10.9	20.0	53.4	121.5	726.1	1118.6	950.0	502.1	50.8	60.7
87.5°	1.8	1.8	7.2	29.0	35.4	242.0	656.3	658.1	225.7	29.9	27.2
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°	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5	3038.5
2.5°	2992.3	2938.7	2863.5	2788.3	2720.3	2650.5	2594.4	2568.0	2556.2	2540.0	2504.5
5°	2923.3	2826.4	2661.4	2499.2	2347.8	2202.7	2078.5	2007.8	1931.7	1928.1	1891.0
7.5°	2812.8	2675.0	2414.8	2162.9	1931.7	1710.6	1520.2	1396.9	1312.5	1260.0	1223.7
10°	2689.5	2512.8	2168.2	1813.8	1499.2	1203.8	959.1	799.6	702.5	653.6	625.5
12.5°	2591.6	2369.5	1925.3	1479.4	1085.1	746.0	518.6	402.5	350.8	330.8	321.8
15°	2507.3	2238.0	1697.8	1180.2	724.3	428.8	300.0	262.0	253.8	253.8	252.9
17.5°	2422.1	2111.2	1476.6	886.5	455.9	281.1	236.5	231.2	232.0	234.8	234.8
20°	2341.4	1990.6	1263.6	631.8	299.2	224.8	214.8	213.0	215.8	219.4	218.4
22.5°	2276.2	1884.5	1064.1	434.2	230.2	204.0	197.6	194.9	196.6	199.4	198.6
25°	2229.9	1793.9	881.0	302.7	200.4	185.8	178.5	175.0	173.1	175.0	174.0
27.5°	2201.8	1717.8	708.9	227.5	179.5	167.7	158.7	151.5	146.9	146.9	145.0
30°	2183.6	1646.2	555.7	188.6	162.2	149.5	136.9	127.0	119.6	117.9	116.9
32.5°	2182.8	1584.5	415.1	166.8	146.0	131.4	116.1	103.4	95.2	93.4	92.5
35°	2205.4	1534.6	305.5	150.4	131.4	114.1	97.0	83.4	76.2	76.2	75.3
37.5°	2264.4	1505.7	231.2	137.7	119.6	99.8	81.6	69.0	62.5	64.4	64.4
40°	2374.1	1500.2	188.6	127.9	109.7	87.0	66.2	56.2	53.4	56.2	56.2
42.5°	2541.7	1529.2	167.7	120.5	100.6	74.3	55.2	48.1	47.1	49.8	49.8
45°	2760.2	1586.3	155.9	114.1	90.6	61.6	46.2	41.7	40.8	44.5	44.5
47.5°	3025.0	1663.4	145.0	107.0	80.7	50.8	39.0	35.4	35.4	39.0	39.9
50°	3338.5	1767.6	134.2	99.8	72.5	42.6	32.7	29.9	30.8	34.4	35.4
52.5°	3699.3	1895.4	124.2	93.4	63.5	34.4	27.2	25.3	26.3	29.9	30.8
55°	4010.3	2007.0	112.4	87.0	51.7	28.1	22.6	21.8	22.6	27.2	27.2
57.5°	4281.4	2113.9	101.5	77.0	40.8	22.6	18.1	18.1	20.0	24.5	25.3
60°	4641.2	2282.5	92.5	65.2	30.8	17.3	14.5	15.4	18.1	21.8	22.6
62.5°	5278.5	2568.9	80.7	54.4	22.6	13.5	11.8	12.7	16.3	20.9	21.8
65°	6076.1	2839.9	67.0	45.4	17.3	10.0	9.1	11.8	16.3	20.9	21.8
67.5°	5994.5	2470.2	52.6	36.3	12.7	8.2	7.2	10.9	15.4	20.9	21.8
70°	4861.4	1731.3	39.0	24.5	10.0	7.2	7.2	10.9	15.4	20.0	20.9
72.5°	3372.1	963.5	29.9	16.3	9.1	7.2	6.3	10.0	14.5	20.0	20.9
75°	1604.5	295.5	23.6	11.8	8.2	6.3	5.5	10.0	14.5	20.0	20.9
77.5°	308.2	75.3	19.0	10.0	7.2	6.3	5.5	9.1	14.5	19.0	20.0
80°	104.3	33.6	15.4	9.1	7.2	6.3	5.5	9.1	13.5	18.1	19.0
82.5°	57.2	19.0	13.5	8.2	7.2	5.5	4.5	8.2	12.7	18.1	19.0
85°	44.5	13.5	10.9	8.2	7.2	5.5	4.5	8.2	12.7	17.3	18.1
87.5°	22.6	10.0	9.1	8.2	7.2	5.5	4.5	7.2	11.8	16.3	18.1
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)