

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: P197031

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197031
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-SL2-8030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1050mA 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: 12057 lumens
Efficiency: N/A
Efficacy: 72.6 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

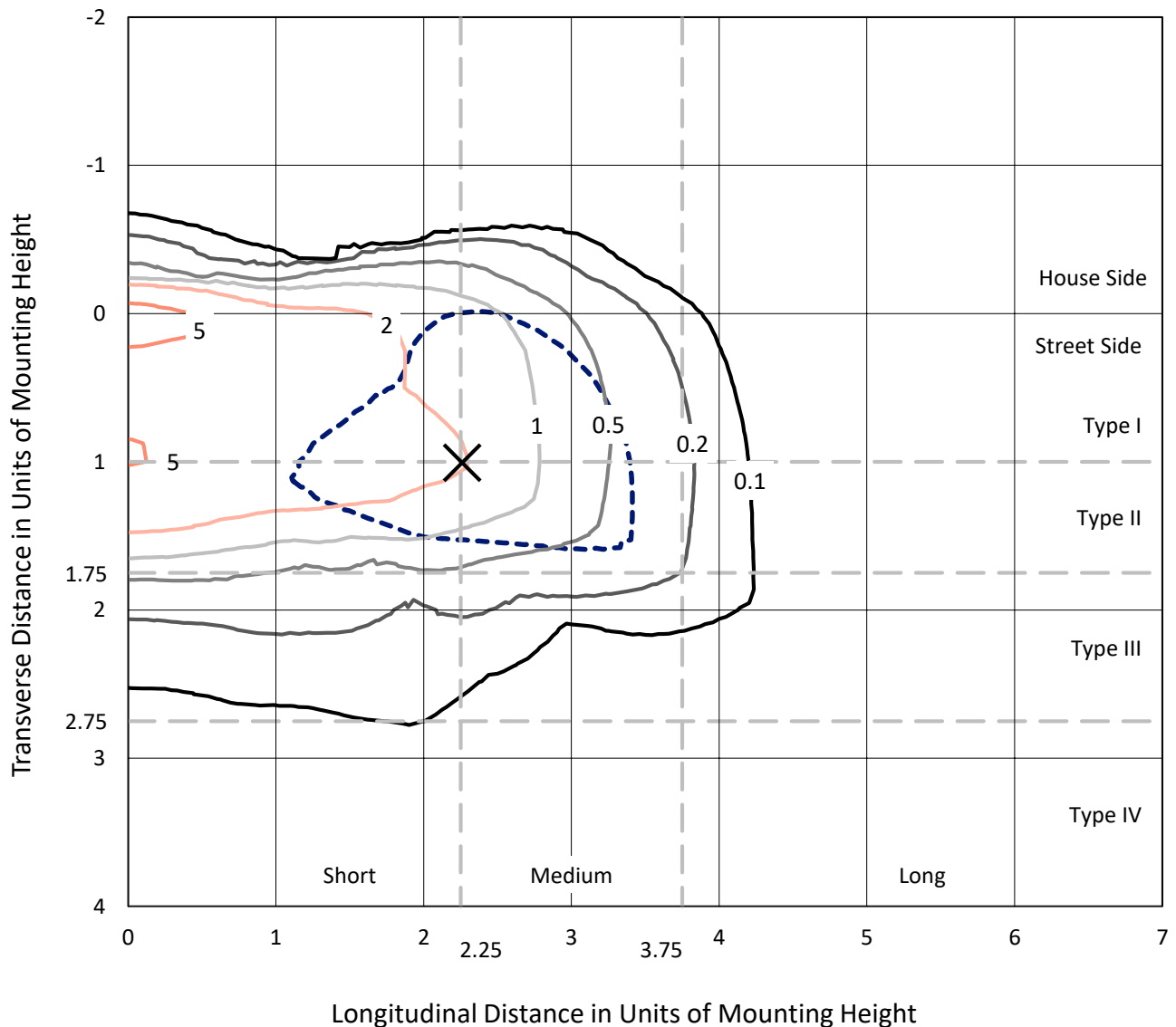
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

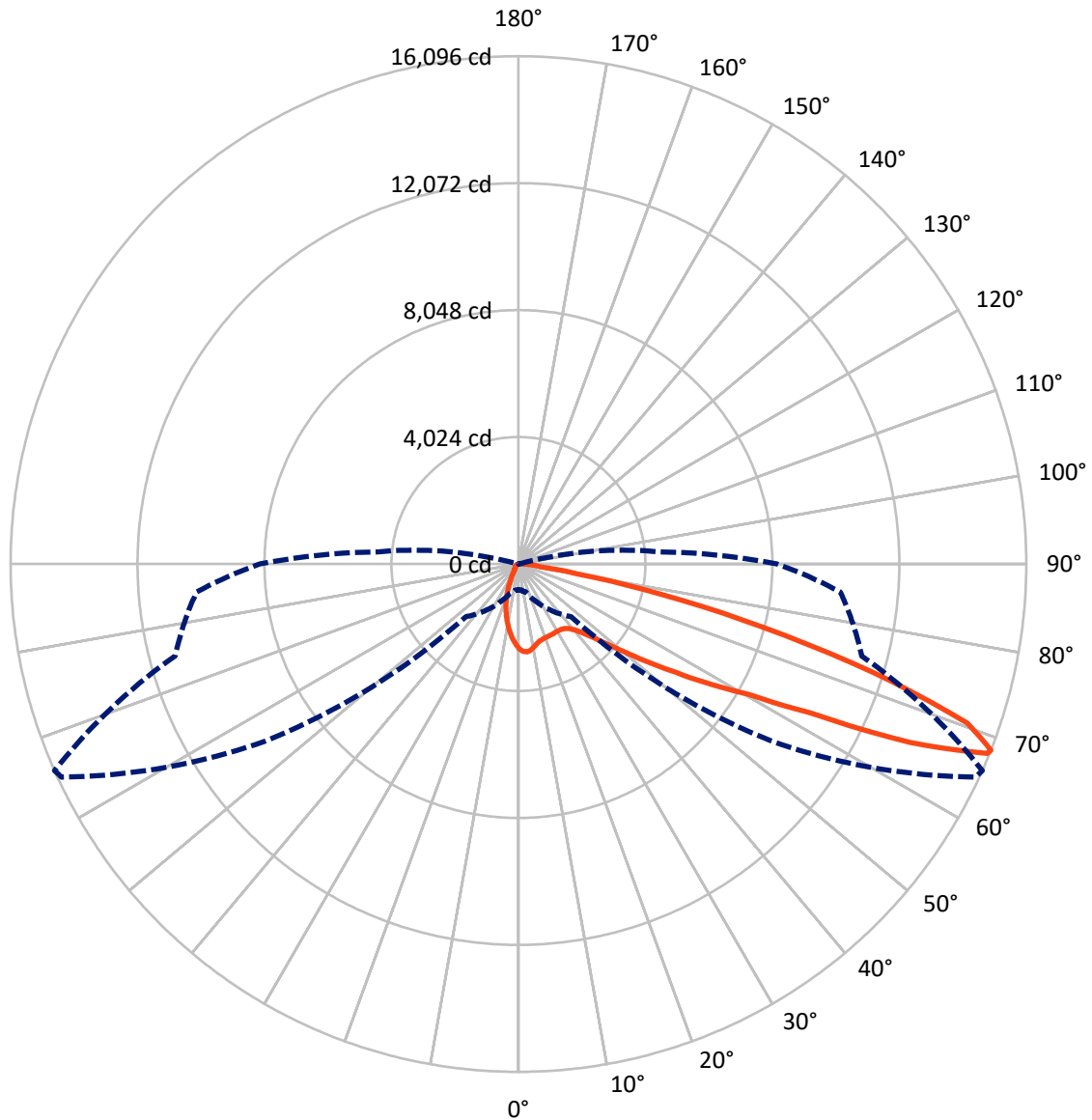


Based on 20 foot mounting height. Maximum calculated value = 6.7 fc
 Type II - Medium - Semi-Cutoff

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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
House Side	Lumens	1221.2	0.0	1221.2
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	10835.8	0.0	10835.8
	% Fixture	89.9	0.0	89.9
Total	Lumens	12057.0	0.0	12057.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.2	1.8
10°-20°	473.8	3.9
20°-30°	686.6	5.7
30°-40°	1051.0	8.7
40°-50°	1797.7	14.9
50°-60°	2812.2	23.3
60°-70°	3238.1	26.9
70°-80°	1620.4	13.4
80°-90°	156.9	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°	12057.0	100.0
0°-180°	12057.0	100.0

Coefficient of Utilization



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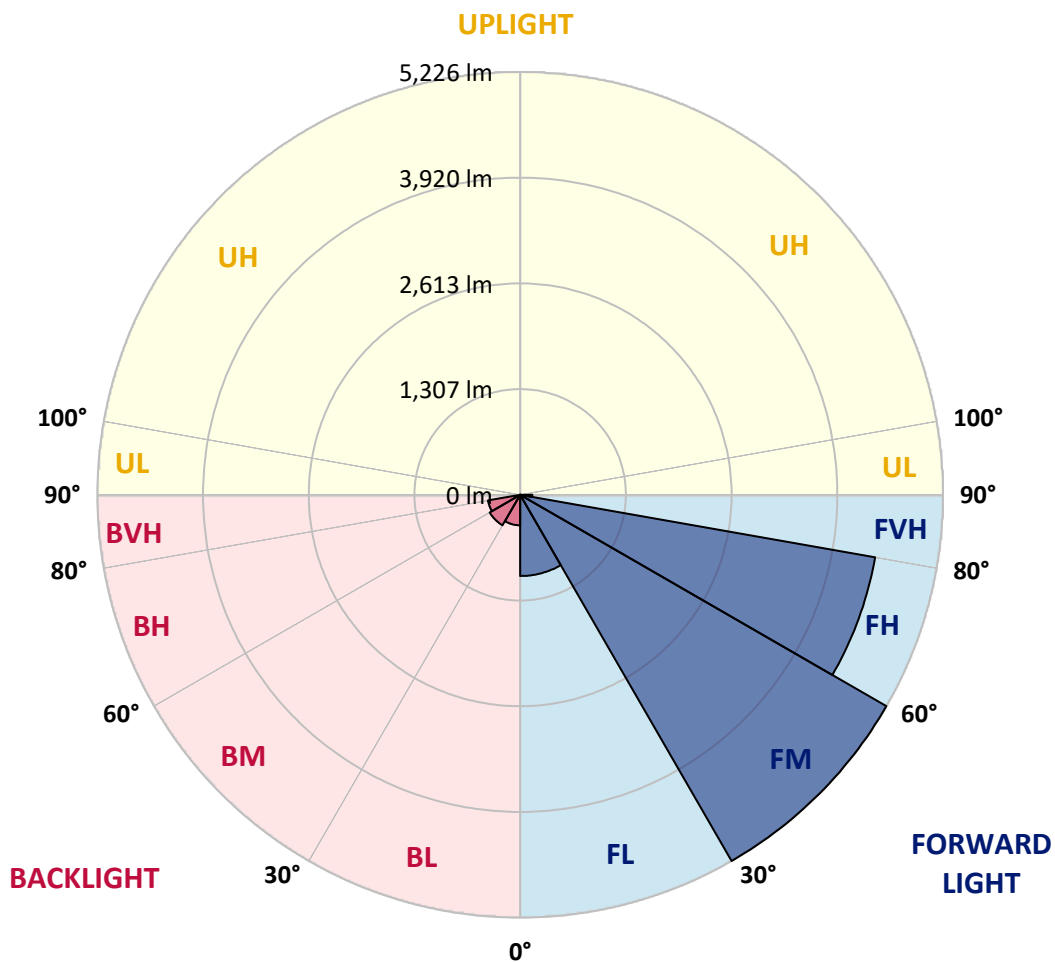
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1003.7	8.3			
FM (30°-60°)	5226.1	43.3			
FH (60°-80°)	4455.0	36.9			G2/5000
FVH (80°-90°)	151.0	1.3			G2/225
BL (0°-30°)	376.9	3.1	B1/500		
BM (30°-60°)	434.9	3.6	B1/1000		
BH (60°-80°)	403.5	3.3	B1/500		G1/500
BVH (80°-90°)	5.9	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°	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2
2.5°	2825.3	2827.2	2826.3	2829.1	2827.2	2813.0	2797.9	2765.7	2768.5	2726.9	2680.5
5°	2626.6	2642.6	2658.7	2674.8	2713.6	2747.7	2788.4	2797.9	2797.9	2761.9	2693.8
7.5°	2424.0	2424.9	2442.9	2464.7	2516.8	2579.2	2673.9	2759.1	2761.0	2770.4	2695.7
10°	2271.6	2276.3	2288.7	2312.3	2364.4	2425.9	2531.9	2665.4	2675.8	2745.8	2676.7
12.5°	2153.3	2159.0	2172.2	2199.7	2247.0	2310.4	2422.1	2574.5	2588.7	2722.2	2671.0
15°	2062.4	2070.0	2080.4	2107.9	2159.0	2226.2	2348.3	2513.9	2531.0	2712.7	2689.0
17.5°	2024.6	2024.6	2023.6	2042.6	2093.7	2161.8	2289.6	2481.7	2503.5	2720.3	2719.3
20°	2040.7	2037.8	2018.0	2013.2	2044.5	2112.6	2243.2	2460.9	2485.5	2734.5	2756.2
22.5°	2125.9	2120.2	2075.7	2038.8	2029.3	2074.7	2212.0	2446.7	2476.1	2763.8	2805.4
25°	2306.6	2289.6	2228.1	2144.8	2070.0	2065.3	2190.2	2439.1	2470.4	2797.9	2859.4
27.5°	2541.4	2536.6	2438.2	2326.5	2182.6	2096.5	2183.6	2433.5	2464.7	2822.5	2902.9
30°	2832.9	2834.8	2721.2	2575.4	2357.7	2184.5	2204.4	2430.6	2462.8	2824.4	2921.9
32.5°	3133.9	3135.8	3041.1	2885.0	2597.2	2336.0	2263.1	2443.9	2473.2	2816.8	2920.9
35°	3423.5	3426.4	3369.6	3243.7	2917.1	2546.1	2373.8	2489.3	2510.1	2821.5	2919.0
37.5°	3789.8	3801.2	3731.1	3613.8	3318.5	2854.7	2554.6	2581.1	2598.2	2860.3	2933.2
40°	4414.5	4399.4	4198.7	3999.9	3753.8	3230.4	2815.9	2739.2	2744.9	2960.7	2987.2
42.5°	5142.4	5123.4	4779.9	4437.2	4201.5	3683.8	3150.0	2981.5	2980.5	3129.2	3104.5
45°	5769.0	5757.6	5396.0	4938.9	4697.5	4184.5	3561.7	3330.8	3319.4	3420.7	3318.5
47.5°	6213.8	6204.4	5930.8	5472.7	5271.1	4735.4	4075.7	3806.8	3783.2	3802.1	3665.8
50°	6257.4	6246.9	6151.3	5857.0	5941.2	5543.7	4710.8	4430.6	4400.3	4371.0	4191.1
52.5°	5850.4	5849.4	5899.6	5880.6	6410.7	6583.9	5489.7	5202.0	5166.0	5091.3	4912.4
55°	5018.4	5013.6	5203.9	5480.3	6400.3	7657.2	6677.6	6120.1	6072.8	5923.2	5688.5
57.5°	3666.8	3642.2	4039.7	4625.6	5950.7	8126.7	8564.0	7260.7	7182.1	6707.9	6346.3
60°	2024.6	2034.0	2545.2	3238.9	4885.9	8033.9	10299.9	8590.5	8384.2	7384.6	7020.2
62.5°	1134.9	1158.5	1539.0	2105.0	3115.0	7281.5	11231.2	10879.1	10382.2	8174.0	7872.1
65°	858.5	872.7	1063.9	1624.2	1964.0	5088.4	11379.8	14079.3	13650.5	9370.4	9228.4
67.5°	808.3	819.7	913.4	1346.9	1788.9	2638.9	10261.1	15972.3	16026.2	11002.2	10279.1
68°	814.0	828.2	921.9	1295.8	1786.1	2360.6	9784.0	15981.8	16096.3	11265.3	10243.1
70°	747.7	751.5	974.9	1271.2	1731.2	1859.9	7078.0	14886.7	15092.0	11578.6	9298.5
72.5°	285.8	286.8	437.3	1100.8	1813.5	1870.3	3565.5	11766.0	11776.4	10076.5	7249.3
75°	148.6	124.9	137.2	344.5	1732.1	1823.0	1788.9	8033.9	7983.8	6814.8	4442.0
77.5°	102.2	87.1	91.8	119.3	720.3	1822.0	1292.0	4619.9	4609.5	2899.1	1267.4
80°	57.7	50.2	54.9	100.3	252.7	1710.3	1204.0	1985.8	1871.2	509.2	205.4
82.5°	29.3	24.6	29.3	84.2	157.1	1076.2	1170.8	779.0	693.8	121.2	133.5
85°	7.6	7.6	14.2	58.7	97.5	353.0	1049.7	562.2	505.4	53.0	94.7
87.5°	1.9	0.9	5.7	21.8	35.0	76.7	582.1	313.3	269.8	27.4	54.9
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°	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2	2686.2
2.5°	2661.6	2635.1	2583.0	2524.3	2482.7	2437.3	2410.8	2378.6	2354.0	2332.2	2348.3
5°	2652.1	2601.0	2485.5	2355.9	2247.0	2142.9	2065.3	1991.4	1935.6	1900.6	1914.8
7.5°	2627.5	2551.8	2364.4	2161.8	1983.9	1816.3	1680.0	1557.9	1463.3	1412.2	1428.3
10°	2585.9	2478.9	2227.1	1946.0	1697.1	1460.5	1257.9	1076.2	938.9	874.6	889.7
12.5°	2555.6	2414.5	2085.2	1737.8	1410.3	1074.3	805.5	597.2	490.3	425.9	431.6
15°	2542.3	2364.4	1952.6	1518.2	1097.0	690.0	435.4	315.2	278.3	265.0	266.0
17.5°	2544.2	2324.6	1826.8	1290.1	780.9	396.6	266.9	240.4	234.7	231.9	231.9
20°	2548.9	2284.9	1696.1	1052.5	499.8	255.6	222.4	213.9	211.1	207.3	208.2
22.5°	2563.1	2254.6	1564.6	814.0	307.6	208.2	196.9	189.3	184.6	178.9	179.8
25°	2584.9	2231.9	1434.9	585.9	216.8	181.7	171.3	160.9	152.4	145.8	146.7
27.5°	2598.2	2199.7	1296.7	399.4	179.8	159.0	144.8	130.6	121.2	115.5	114.5
30°	2588.7	2147.6	1139.6	262.2	159.0	137.2	120.2	104.1	94.7	89.9	89.9
32.5°	2563.1	2080.4	966.4	191.2	141.0	118.3	97.5	83.3	76.7	73.8	74.8
35°	2533.8	2010.4	781.8	161.9	126.8	100.3	79.5	68.1	65.3	64.4	64.4
37.5°	2517.7	1949.8	604.8	146.7	113.6	83.3	65.3	58.7	55.8	55.8	55.8
40°	2535.7	1903.4	447.7	135.4	100.3	69.1	54.9	50.2	49.2	49.2	49.2
42.5°	2612.4	1887.3	327.5	125.9	87.1	57.7	47.3	43.5	42.6	43.5	43.5
45°	2761.9	1922.4	248.0	116.4	74.8	47.3	40.7	37.9	37.9	38.8	38.8
47.5°	3015.6	2012.3	203.5	107.0	62.5	39.8	35.0	33.1	33.1	34.1	34.1
50°	3409.3	2178.9	182.7	96.5	52.1	34.1	29.3	28.4	28.4	29.3	30.3
52.5°	4007.5	2495.9	172.3	86.1	42.6	28.4	24.6	23.7	24.6	25.6	25.6
55°	4672.9	2902.0	160.0	75.7	36.0	23.7	19.9	19.9	20.8	22.7	22.7
57.5°	5292.9	3293.8	148.6	62.5	31.2	18.9	16.1	16.1	18.0	19.9	19.9
60°	5947.8	3678.1	133.5	50.2	26.5	15.1	13.3	13.3	16.1	18.0	18.9
62.5°	6757.1	4124.9	113.6	39.8	20.8	11.4	9.5	12.3	15.1	18.0	18.0
65°	7927.0	4680.5	89.0	31.2	16.1	8.5	7.6	11.4	14.2	17.0	18.0
67.5°	8352.0	4609.5	67.2	25.6	12.3	6.6	6.6	10.4	14.2	17.0	17.0
68°	8196.7	4454.3	64.4	24.6	11.4	6.6	6.6	10.4	14.2	17.0	17.0
70°	7142.3	3641.2	53.0	18.9	9.5	5.7	5.7	9.5	14.2	16.1	17.0
72.5°	5347.8	2419.3	45.4	12.3	8.5	5.7	4.7	9.5	13.3	16.1	16.1
75°	3067.6	1004.2	38.8	9.5	7.6	4.7	4.7	8.5	13.3	16.1	16.1
77.5°	867.0	234.7	31.2	7.6	6.6	4.7	3.8	8.5	12.3	15.1	15.1
80°	159.0	70.0	24.6	6.6	5.7	4.7	3.8	8.5	12.3	15.1	15.1
82.5°	105.1	33.1	18.0	6.6	5.7	4.7	3.8	7.6	11.4	14.2	14.2
85°	78.6	23.7	11.4	6.6	5.7	4.7	3.8	7.6	11.4	14.2	14.2
87.5°	43.5	10.4	8.5	7.6	6.6	4.7	3.8	6.6	10.4	13.3	13.3
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)