

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: P195639

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195639
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-SL3-7050-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5000K, 1050mA 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: 15377 lumens
Efficiency: N/A
Efficacy: 92.6 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 - G3

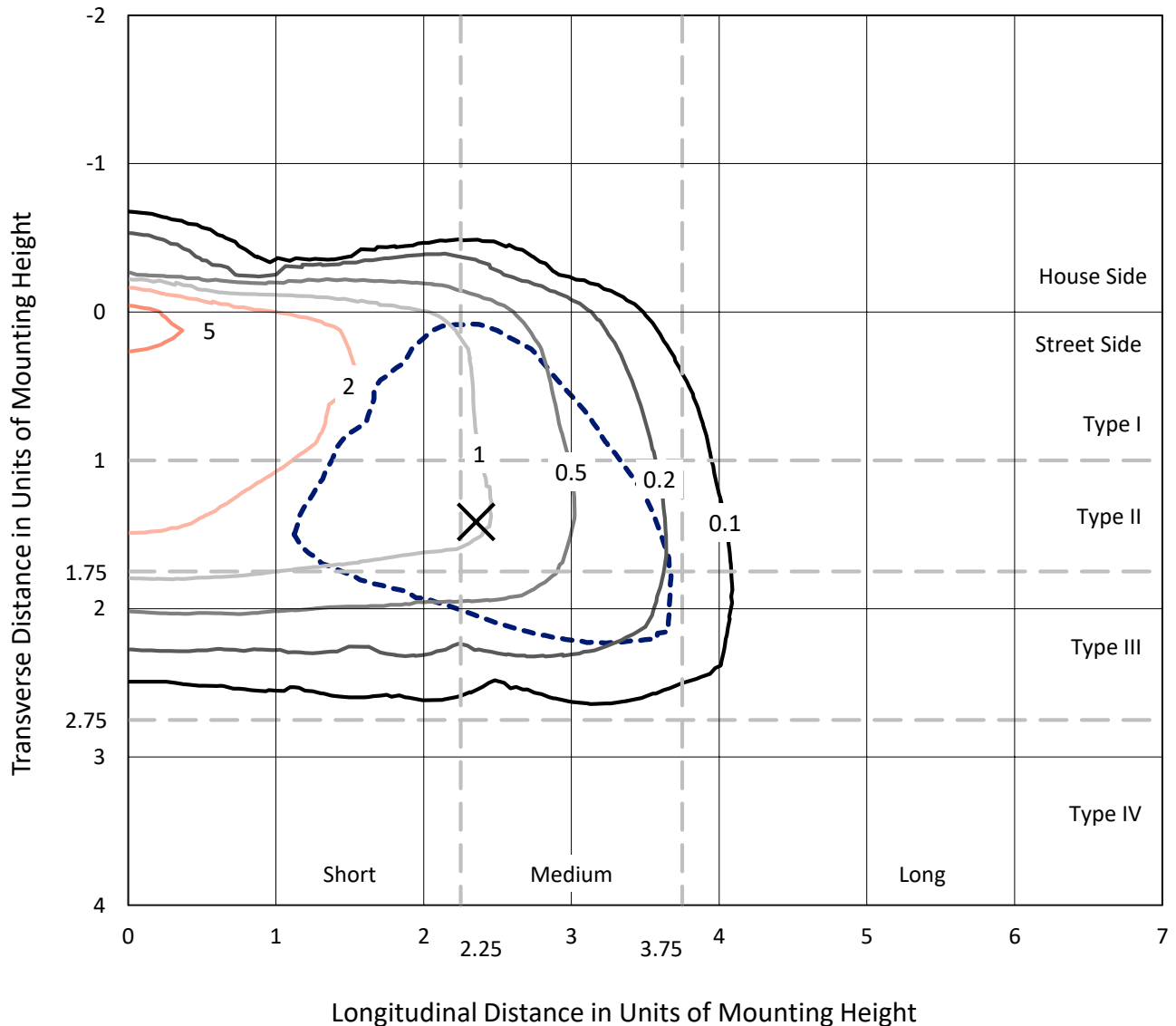
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

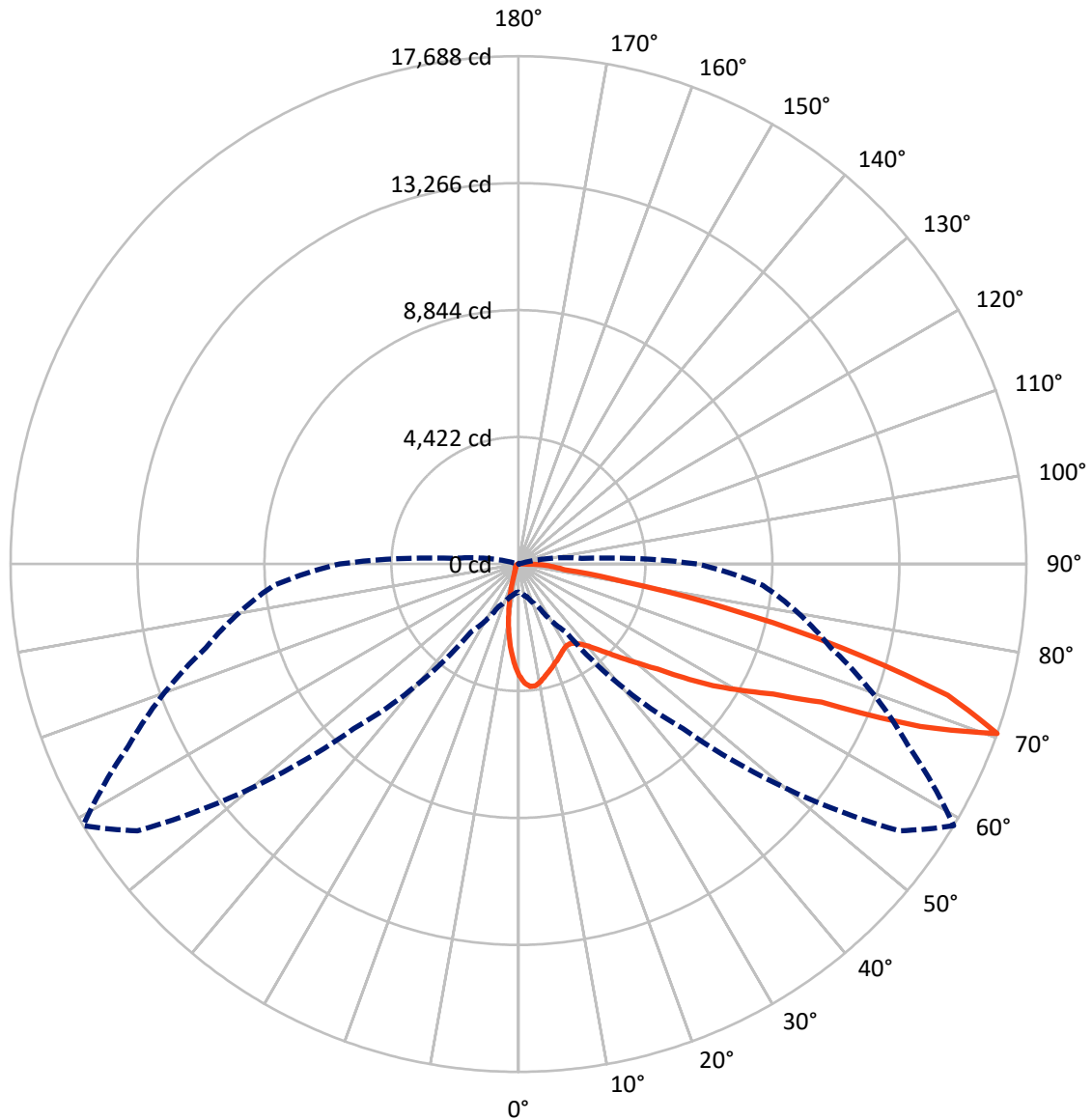
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 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	1182.1	0.0	1182.1
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	14194.9	0.0	14194.9
	% Fixture	92.3	0.0	92.3
Total	Lumens	15377.0	0.0	15377.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	319.7	2.1
10°-20°	670.6	4.4
20°-30°	907.8	5.9
30°-40°	1310.1	8.5
40°-50°	2175.8	14.1
50°-60°	3328.1	21.6
60°-70°	4139.4	26.9
70°-80°	2288.2	14.9
80°-90°	237.3	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°	15377.0	100.0
0°-180°	15377.0	100.0



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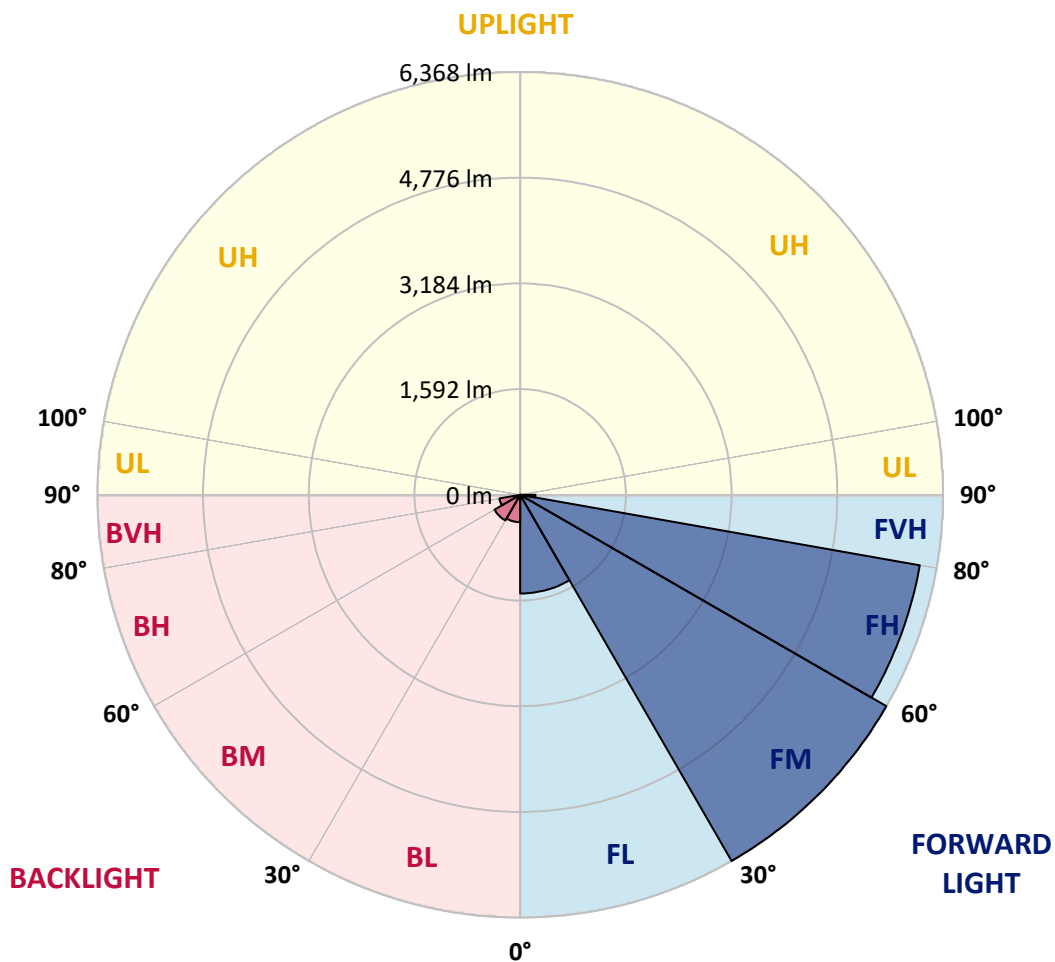
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1486.2	9.7			
FM	(30°-60°)	6367.8	41.4			
FH	(60°-80°)	6110.5	39.7			G3/7500
FVH	(80°-90°)	230.4	1.5			G3/500
BL	(0°-30°)	411.9	2.7	B1/500		
BM	(30°-60°)	446.2	2.9	B1/1000		
BH	(60°-80°)	317.1	2.1	B1/500		G1/500
BVH	(80°-90°)	6.9	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-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3
2.5°	4395.2	4388.2	4359.2	4353.4	4321.0	4256.0	4180.6	4150.4	4089.0	3991.5	3883.6
5°	4468.3	4471.8	4474.1	4461.3	4456.7	4403.3	4319.8	4283.8	4201.5	4041.4	3844.2
7.5°	4194.5	4203.8	4232.8	4245.6	4301.2	4322.1	4304.7	4281.5	4216.6	4027.5	3750.3
10°	3905.7	3923.1	3954.4	3975.3	4043.7	4099.4	4170.2	4176.0	4162.0	3981.1	3644.7
12.5°	3657.5	3673.7	3708.5	3750.3	3819.9	3891.8	3997.3	4034.4	4080.8	3950.9	3569.3
15°	3444.0	3448.7	3482.3	3534.5	3626.1	3724.7	3850.0	3904.5	3995.0	3939.3	3511.3
17.5°	3257.3	3258.4	3280.5	3328.0	3439.4	3569.3	3715.5	3787.4	3902.2	3923.1	3460.3
20°	3134.3	3133.1	3134.3	3159.8	3258.4	3412.7	3590.2	3665.6	3812.9	3903.4	3408.1
22.5°	3092.5	3086.7	3060.1	3050.8	3113.4	3249.1	3461.4	3560.0	3732.9	3897.6	3369.8
25°	3143.6	3140.1	3083.3	3029.9	3035.7	3120.4	3330.3	3451.0	3670.2	3918.4	3360.5
27.5°	3308.3	3301.3	3214.3	3109.9	3043.8	3058.9	3232.9	3359.3	3620.3	3969.5	3373.3
30°	3524.1	3525.2	3432.4	3306.0	3150.5	3064.7	3180.7	3300.2	3586.7	4046.0	3401.1
32.5°	3764.2	3763.0	3696.9	3550.7	3352.4	3171.4	3203.9	3304.8	3591.3	4158.6	3454.5
35°	4012.4	3999.6	3977.6	3848.9	3616.9	3358.2	3309.5	3383.7	3640.1	4307.0	3544.9
37.5°	4298.9	4294.3	4316.3	4180.6	3944.0	3633.1	3495.1	3544.9	3763.0	4526.3	3691.1
40°	4754.8	4729.3	4739.7	4555.3	4312.8	4003.1	3754.9	3767.7	3959.0	4816.3	3921.9
42.5°	5623.6	5520.4	5326.7	4981.0	4718.8	4413.8	4094.8	4072.7	4236.3	5167.8	4225.8
45°	6661.8	6543.5	6055.2	5450.8	5124.8	4854.6	4514.7	4455.5	4577.3	5586.5	4617.9
47.5°	7528.3	7400.7	6753.5	5941.5	5537.8	5309.3	4979.8	4910.2	4985.6	6072.6	5088.9
50°	7824.1	7753.4	7185.0	6349.8	5954.2	5819.7	5563.3	5447.3	5465.9	6596.9	5638.7
52.5°	7688.4	7664.1	7283.6	6629.3	6339.4	6383.4	6202.5	6080.7	6059.8	7169.9	6246.6
55°	7401.9	7390.3	7204.7	6784.8	6679.2	6899.6	7099.1	6993.6	6796.4	7778.9	6748.8
57.5°	6992.4	7036.5	7169.9	7084.1	7096.8	7444.8	7932.0	7986.5	7691.9	8263.8	7121.2
60°	5898.6	6016.9	6628.2	7405.4	8000.5	8351.9	8824.1	8926.1	8450.5	8595.5	7551.5
62.5°	4360.4	4529.8	5400.9	6828.9	8498.1	10076.8	10010.7	9965.5	9174.4	9039.8	8334.5
65°	2561.3	2759.6	3496.2	5336.0	7747.6	11185.8	12226.3	11599.9	10277.5	9963.2	9581.5
67.5°	1276.0	1277.2	1610.1	2816.5	5725.7	10412.1	15460.4	15098.4	12623.0	11323.8	10073.4
70°	981.4	1008.0	1191.3	1636.7	2895.3	8109.5	16201.6	17687.5	14980.1	11263.5	8546.8
72.5°	831.7	849.1	1060.2	1424.5	2164.5	4452.0	14025.5	15634.4	14294.6	9516.6	6299.9
75°	598.6	612.5	938.4	1292.2	1992.9	2208.6	9621.0	11595.3	10725.3	6694.3	3467.2
77.5°	148.5	147.3	327.1	1048.6	1782.9	1839.7	5520.4	7435.5	6153.8	2741.1	890.9
80°	66.1	63.8	74.2	220.4	1658.8	1736.5	2427.9	3754.9	2360.6	444.3	272.6
82.5°	46.4	44.1	46.4	81.2	554.5	1611.2	1467.4	1627.5	864.2	152.0	116.0
85°	15.1	13.9	25.5	68.4	155.4	929.2	1431.4	1215.7	642.6	65.0	77.7
87.5°	2.3	2.3	9.3	37.1	45.2	309.7	839.8	842.2	288.8	38.3	34.8
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°	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3	3888.3
2.5°	3829.1	3760.7	3664.4	3568.1	3481.1	3391.8	3319.9	3286.3	3271.2	3250.3	3205.1
5°	3741.0	3616.9	3405.7	3198.1	3004.4	2818.8	2659.9	2569.4	2471.9	2467.3	2419.7
7.5°	3599.5	3423.1	3090.2	2767.7	2471.9	2188.9	1945.3	1787.5	1679.7	1612.4	1566.0
10°	3441.7	3215.5	2774.7	2321.1	1918.6	1540.5	1227.3	1023.1	899.0	836.4	800.4
12.5°	3316.4	3032.2	2463.8	1893.1	1388.5	954.7	663.5	515.0	448.9	423.4	411.8
15°	3208.5	2864.0	2172.7	1510.3	926.8	548.7	384.0	335.2	324.8	324.8	323.6
17.5°	3099.5	2701.6	1889.6	1134.5	583.5	359.6	302.8	295.8	297.0	300.4	300.4
20°	2996.3	2547.3	1617.0	808.5	382.8	287.7	274.9	272.6	276.1	280.7	279.6
22.5°	2912.7	2411.6	1361.8	555.6	294.6	261.0	252.9	249.4	251.7	255.2	254.0
25°	2853.6	2295.6	1127.5	387.4	256.4	237.8	228.5	223.9	221.6	223.9	222.7
27.5°	2817.6	2198.2	907.1	291.2	229.7	214.6	203.0	193.7	187.9	187.9	185.6
30°	2794.4	2106.5	711.1	241.3	207.6	191.4	175.2	162.4	153.1	150.8	149.6
32.5°	2793.3	2027.7	531.3	213.4	186.8	168.2	148.5	132.2	121.8	119.5	118.3
35°	2822.3	1963.9	390.9	192.6	168.2	146.2	124.1	106.7	97.4	97.4	96.3
37.5°	2897.7	1926.7	295.8	176.3	153.1	127.6	104.4	88.2	80.0	82.4	82.4
40°	3038.0	1919.8	241.3	163.6	140.4	111.4	84.7	71.9	68.4	71.9	71.9
42.5°	3252.6	1956.9	214.6	154.3	128.8	95.1	70.8	61.5	60.3	63.8	63.8
45°	3532.2	2030.0	199.5	146.2	116.0	78.9	59.2	53.4	52.2	56.8	56.8
47.5°	3870.9	2128.6	185.6	136.9	103.2	65.0	49.9	45.2	45.2	49.9	51.0
50°	4272.2	2262.0	171.7	127.6	92.8	54.5	41.8	38.3	39.4	44.1	45.2
52.5°	4733.9	2425.5	158.9	119.5	81.2	44.1	34.8	32.5	33.6	38.3	39.4
55°	5131.8	2568.2	143.8	111.4	66.1	36.0	29.0	27.8	29.0	34.8	34.8
57.5°	5478.6	2705.1	129.9	98.6	52.2	29.0	23.2	23.2	25.5	31.3	32.5
60°	5939.2	2920.9	118.3	83.5	39.4	22.0	18.6	19.7	23.2	27.8	29.0
62.5°	6754.6	3287.4	103.2	69.6	29.0	17.4	15.1	16.2	20.9	26.7	27.8
65°	7775.4	3634.3	85.8	58.0	22.0	12.8	11.6	15.1	20.9	26.7	27.8
67.5°	7671.0	3161.0	67.3	46.4	16.2	10.4	9.3	13.9	19.7	26.7	27.8
70°	6221.0	2215.6	49.9	31.3	12.8	9.3	9.3	13.9	19.7	25.5	26.7
72.5°	4315.2	1233.1	38.3	20.9	11.6	9.3	8.1	12.8	18.6	25.5	26.7
75°	2053.2	378.2	30.2	15.1	10.4	8.1	7.0	12.8	18.6	25.5	26.7
77.5°	394.4	96.3	24.4	12.8	9.3	8.1	7.0	11.6	18.6	24.4	25.5
80°	133.4	42.9	19.7	11.6	9.3	8.1	7.0	11.6	17.4	23.2	24.4
82.5°	73.1	24.4	17.4	10.4	9.3	7.0	5.8	10.4	16.2	23.2	24.4
85°	56.8	17.4	13.9	10.4	9.3	7.0	5.8	10.4	16.2	22.0	23.2
87.5°	29.0	12.8	11.6	10.4	9.3	7.0	5.8	9.3	15.1	20.9	23.2
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)