

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: P195034

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-7060-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195034
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
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-AFL-7060-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16545 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 171
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

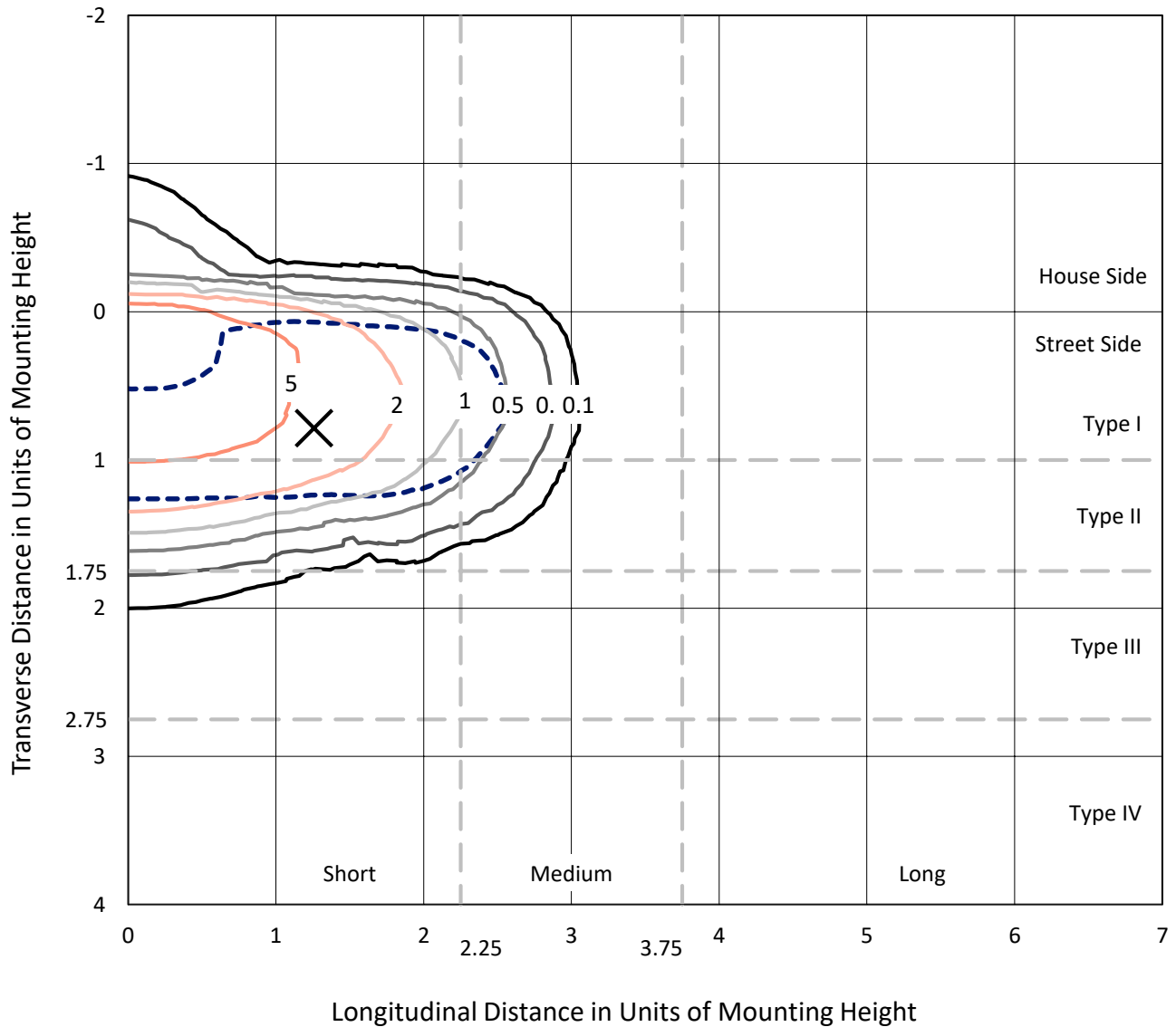


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

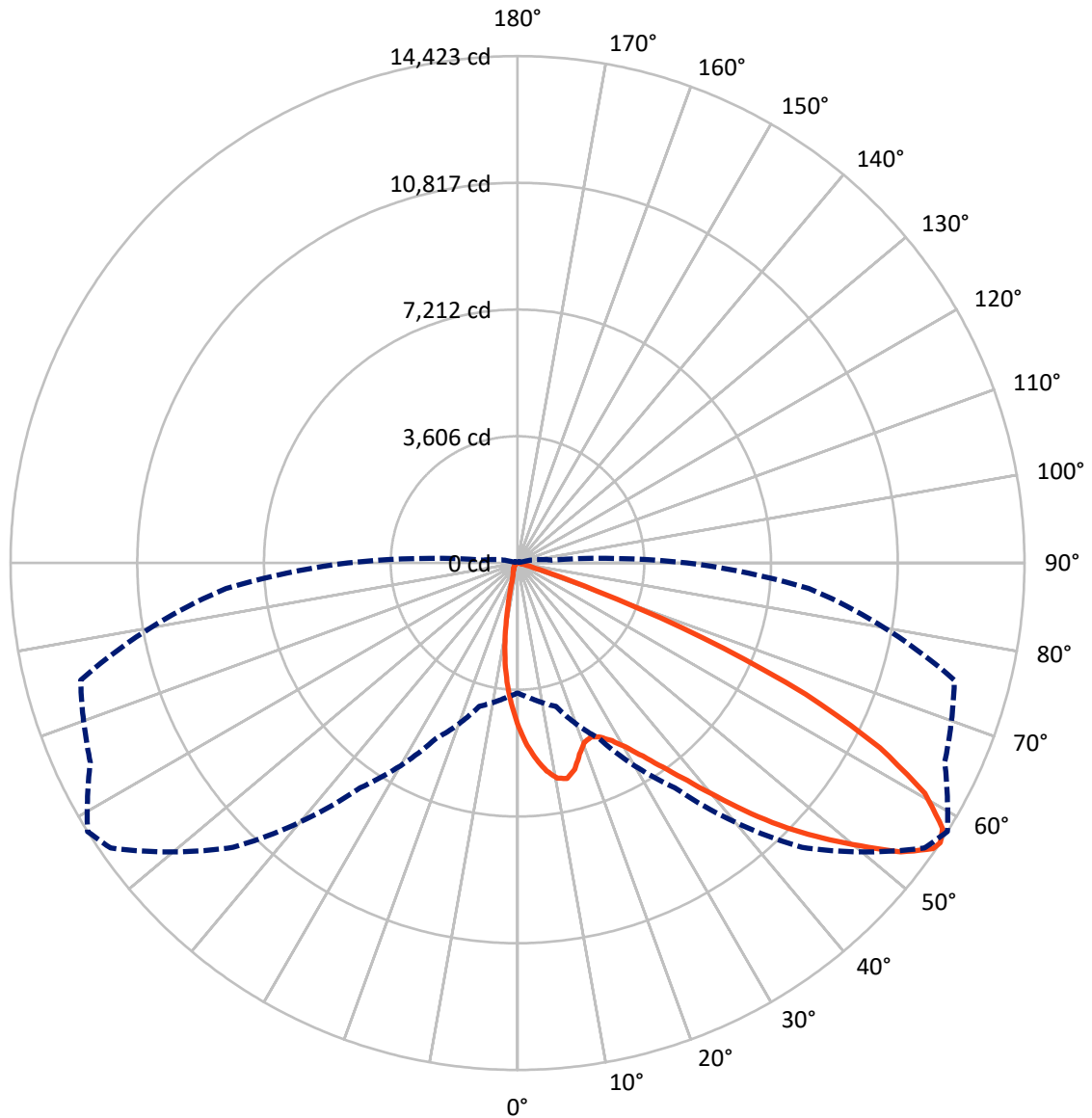


Based on 25 foot mounting height. Maximum calculated value = 9.3 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1032.8	0.0	1032.8
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	15512.3	0.0	15512.3
	% Fixture	93.8	0.0	93.8
Total	Lumens	16545.0	0.0	16545.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.6	2.4
10°-20°	929.8	5.6
20°-30°	1564.6	9.5
30°-40°	2679.2	16.2
40°-50°	4042.9	24.4
50°-60°	4202.5	25.4
60°-70°	2359.2	14.3
70°-80°	323.3	2.0
80°-90°	43.8	0.3
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°	16545.0	100.0
0°-180°	16545.0	100.0

Coefficient of Utilization



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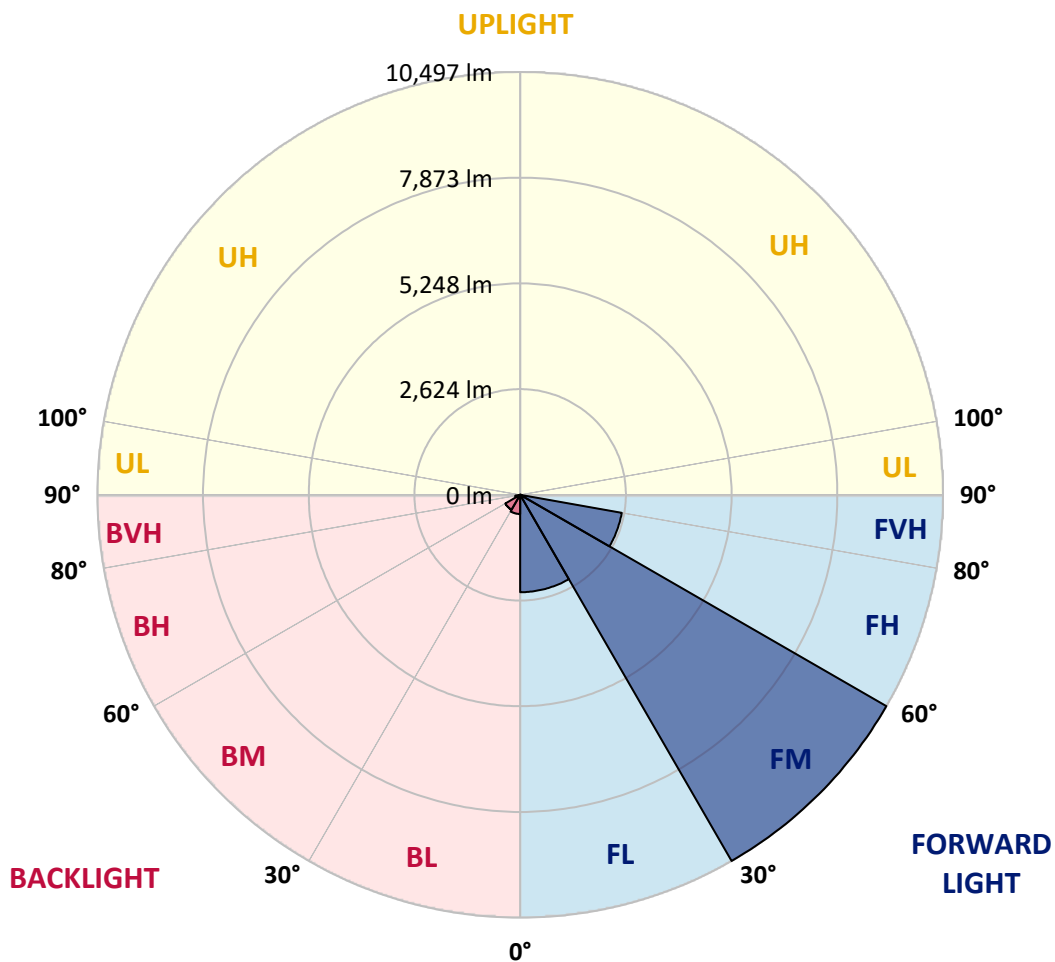
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2417.6	14.6			
FM	(30°-60°)	10496.8	63.4			
FH	(60°-80°)	2560.1	15.5			G2/5000
FVH	(80°-90°)	37.8	0.2			G1/100
BL	(0°-30°)	476.4	2.9	B1/500		
BM	(30°-60°)	427.8	2.6	B1/1000		
BH	(60°-80°)	122.5	0.7	B1/500		G1/500
BVH	(80°-90°)	6.1	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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4
2.5°	5636.2	5602.1	5566.7	5501.1	5440.5	5347.1	5218.3	5186.8	5085.8	4919.2	4763.9
5°	6122.1	6115.8	6091.9	6038.8	5973.2	5859.6	5714.4	5617.2	5460.7	5198.1	4899.0
7.5°	5834.3	5887.4	5974.5	6098.2	6181.5	6170.1	6059.0	5974.5	5819.2	5460.7	5031.5
10°	4917.9	4928.0	5047.9	5308.0	5719.5	6103.2	6248.4	6225.7	6083.0	5690.4	5147.7
12.5°	4594.8	4601.1	4628.8	4712.2	4979.8	5515.0	6172.6	6291.3	6279.9	5910.1	5271.4
15°	4620.0	4623.8	4631.4	4657.9	4733.6	5002.5	5788.9	6090.6	6406.2	6118.4	5392.5
17.5°	4819.5	4816.9	4792.9	4767.7	4791.7	4880.0	5397.6	5715.7	6379.7	6293.8	5492.3
20°	5208.2	5220.9	5140.1	5027.7	4969.7	4973.5	5204.5	5443.0	6230.7	6430.1	5566.7
22.5°	5754.8	5763.7	5631.1	5436.7	5266.3	5180.5	5244.9	5371.1	6059.0	6556.4	5627.3
25°	6407.4	6407.4	6221.9	5945.4	5681.6	5493.5	5438.0	5485.9	5993.4	6699.0	5687.9
27.5°	7111.8	7137.0	6894.7	6532.4	6184.0	5908.8	5734.6	5725.8	6043.9	6878.3	5756.1
30°	7878.0	7900.7	7612.9	7169.9	6757.1	6404.9	6137.3	6079.2	6237.0	7119.4	5855.8
32.5°	8640.4	8659.4	8341.3	7889.4	7408.4	6994.4	6642.2	6550.1	6584.1	7471.5	6002.2
35°	9609.9	9613.7	9211.0	8673.3	8159.5	7673.5	7227.9	7137.0	7099.2	7915.9	6213.0
37.5°	10381.1	10350.8	10095.9	9587.2	8997.7	8490.2	7966.4	7847.7	7756.8	8540.7	6540.0
40°	10562.9	10562.9	10525.0	10372.3	9904.0	9415.5	8908.0	8731.3	8530.6	9276.6	6979.2
42.5°	10089.6	10119.8	10369.8	10701.8	10705.6	10392.5	9896.4	9747.5	9394.0	10114.8	7458.9
45°	9030.5	9039.3	9638.9	10535.1	11143.6	11322.8	10956.8	10751.0	10261.2	10985.8	7898.2
47.5°	8649.3	8677.0	8932.0	10027.7	11176.4	12076.4	11974.2	11691.4	11064.0	11781.0	8308.4
50°	8063.6	8097.6	8409.4	9280.4	10881.0	12559.9	12947.4	12644.4	11794.9	12443.7	8511.7
52.5°	6662.4	6715.4	7156.0	8292.0	10142.6	12580.1	13838.6	13656.8	12543.5	12798.4	8487.7
55°	4584.7	4623.8	5137.6	6473.1	8653.1	11962.8	14222.3	14347.3	13211.2	12878.0	8371.6
56°	3698.5	3845.0	4221.1	5515.0	7804.8	11437.7	14134.0	14423.0	13409.4	12865.3	8321.1
57.5°	2445.1	2472.8	2883.1	3996.4	6267.3	10297.8	13735.1	14261.4	13664.4	12801.0	8284.5
60°	1150.0	1162.6	1310.3	1844.2	3391.8	7504.4	12438.7	13312.2	13757.8	12665.9	8283.2
62.5°	749.8	752.3	770.0	879.8	1387.3	4087.3	10311.7	11569.0	12984.0	12650.8	8259.2
65°	617.3	623.6	602.1	616.0	725.8	1541.3	7273.4	9019.1	11167.6	12294.8	7989.1
67.5°	544.1	545.3	516.3	499.9	531.4	676.6	3664.5	5689.2	8352.6	10446.8	6580.4
70°	496.1	494.8	462.0	424.1	425.4	449.4	1194.1	2363.0	4621.3	6202.9	3778.1
72.5°	440.5	443.1	424.1	371.1	353.4	318.1	449.4	637.5	1572.8	1991.9	996.0
75°	386.3	381.2	362.3	328.2	295.4	213.3	226.0	271.4	410.2	406.5	214.6
77.5°	292.9	287.8	296.6	280.2	231.0	149.0	123.7	141.4	185.6	172.9	87.1
80°	223.4	220.9	202.0	239.8	210.8	112.3	84.6	87.1	101.0	92.1	42.9
82.5°	161.6	160.3	152.7	147.7	133.8	82.0	64.4	68.2	75.7	64.4	31.6
85°	61.9	61.9	119.9	101.0	92.1	55.5	45.4	49.2	58.1	46.7	21.5
87.5°	10.1	10.1	80.8	66.9	41.7	27.8	29.0	31.6	34.1	27.8	16.4
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°	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4	4684.4
2.5°	4671.8	4587.2	4401.6	4222.4	4065.9	3894.2	3807.1	3706.1	3668.2	3592.5	3600.1
5°	4719.7	4543.0	4170.6	3778.1	3418.3	3052.2	2792.2	2547.3	2411.0	2275.9	2275.9
7.5°	4769.0	4498.8	3923.2	3295.9	2690.0	2062.6	1618.3	1262.3	1064.1	931.6	927.8
10°	4803.0	4442.0	3641.7	2736.7	1843.0	1062.9	641.2	504.9	455.7	434.2	433.0
12.5°	4847.2	4385.2	3321.1	2077.7	1023.7	504.9	400.1	378.7	369.9	364.8	364.8
15°	4885.1	4304.4	2932.3	1397.4	537.7	378.7	344.6	337.0	335.8	334.5	335.8
17.5°	4893.9	4189.6	2466.5	818.0	390.1	330.7	315.6	309.3	309.3	308.0	308.0
20°	4873.7	4038.1	1951.5	504.9	337.0	304.2	287.8	280.2	279.0	279.0	279.0
22.5°	4832.1	3845.0	1442.8	382.5	306.7	280.2	258.8	251.2	251.2	252.5	253.7
25°	4780.3	3616.5	990.9	329.5	284.0	255.0	233.5	226.0	228.5	231.0	232.3
27.5°	4714.7	3343.8	648.8	285.3	253.7	229.7	210.8	205.8	210.8	215.9	218.4
30°	4649.0	3044.7	439.3	247.4	219.6	202.0	190.6	189.3	196.9	208.3	209.5
32.5°	4606.1	2737.9	332.0	222.2	193.1	178.0	172.9	175.5	186.8	199.4	202.0
35°	4602.3	2438.8	282.8	202.0	175.5	161.6	159.0	166.6	179.2	189.3	191.9
37.5°	4661.7	2158.5	256.2	186.8	161.6	147.7	143.9	157.8	169.1	179.2	181.8
40°	4781.6	1907.3	238.6	172.9	150.2	133.8	131.3	142.6	154.0	165.4	169.1
42.5°	4931.8	1672.5	218.4	159.0	137.6	118.7	116.1	125.0	136.3	152.7	155.3
45°	5061.8	1454.2	196.9	143.9	123.7	102.2	101.0	111.1	119.9	135.1	137.6
47.5°	5171.6	1272.4	176.7	127.5	106.0	90.9	89.6	94.7	99.7	113.6	116.1
50°	5113.6	1118.4	156.5	104.8	85.8	78.3	77.0	77.0	83.3	97.2	99.7
52.5°	4970.9	1022.5	137.6	87.1	70.7	66.9	63.1	64.4	70.7	77.0	78.3
55°	4856.1	977.0	121.2	77.0	59.3	55.5	51.8	50.5	51.8	49.2	46.7
56°	4828.3	972.0	117.4	74.5	56.8	51.8	46.7	44.2	42.9	37.9	36.6
57.5°	4815.7	972.0	111.1	69.4	53.0	46.7	40.4	35.3	30.3	26.5	26.5
60°	4805.6	978.3	103.5	60.6	45.4	37.9	29.0	21.5	17.7	17.7	17.7
62.5°	4784.1	975.8	94.7	50.5	39.1	29.0	17.7	13.9	12.6	13.9	15.1
65°	4543.0	906.3	83.3	40.4	30.3	20.2	10.1	10.1	11.4	13.9	15.1
67.5°	3660.7	686.7	68.2	31.6	21.5	15.1	8.8	8.8	11.4	13.9	15.1
70°	2010.8	362.3	58.1	22.7	16.4	12.6	8.8	7.6	11.4	13.9	15.1
72.5°	491.0	151.5	53.0	17.7	15.1	11.4	7.6	7.6	11.4	13.9	15.1
75°	121.2	113.6	42.9	13.9	12.6	10.1	7.6	7.6	11.4	13.9	15.1
77.5°	56.8	150.2	29.0	12.6	11.4	8.8	7.6	7.6	11.4	13.9	13.9
80°	34.1	113.6	17.7	11.4	10.1	8.8	7.6	7.6	11.4	13.9	15.1
82.5°	20.2	32.8	12.6	11.4	10.1	7.6	7.6	7.6	11.4	13.9	15.1
85°	17.7	16.4	12.6	11.4	10.1	8.8	7.6	7.6	12.6	15.1	15.1
87.5°	13.9	12.6	11.4	10.1	10.1	8.8	7.6	7.6	11.4	13.9	15.1
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)