

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: P195045

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7060-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195045
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-03-D-UNV-AFL-7060-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 1200mA 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: 16679 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 191
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

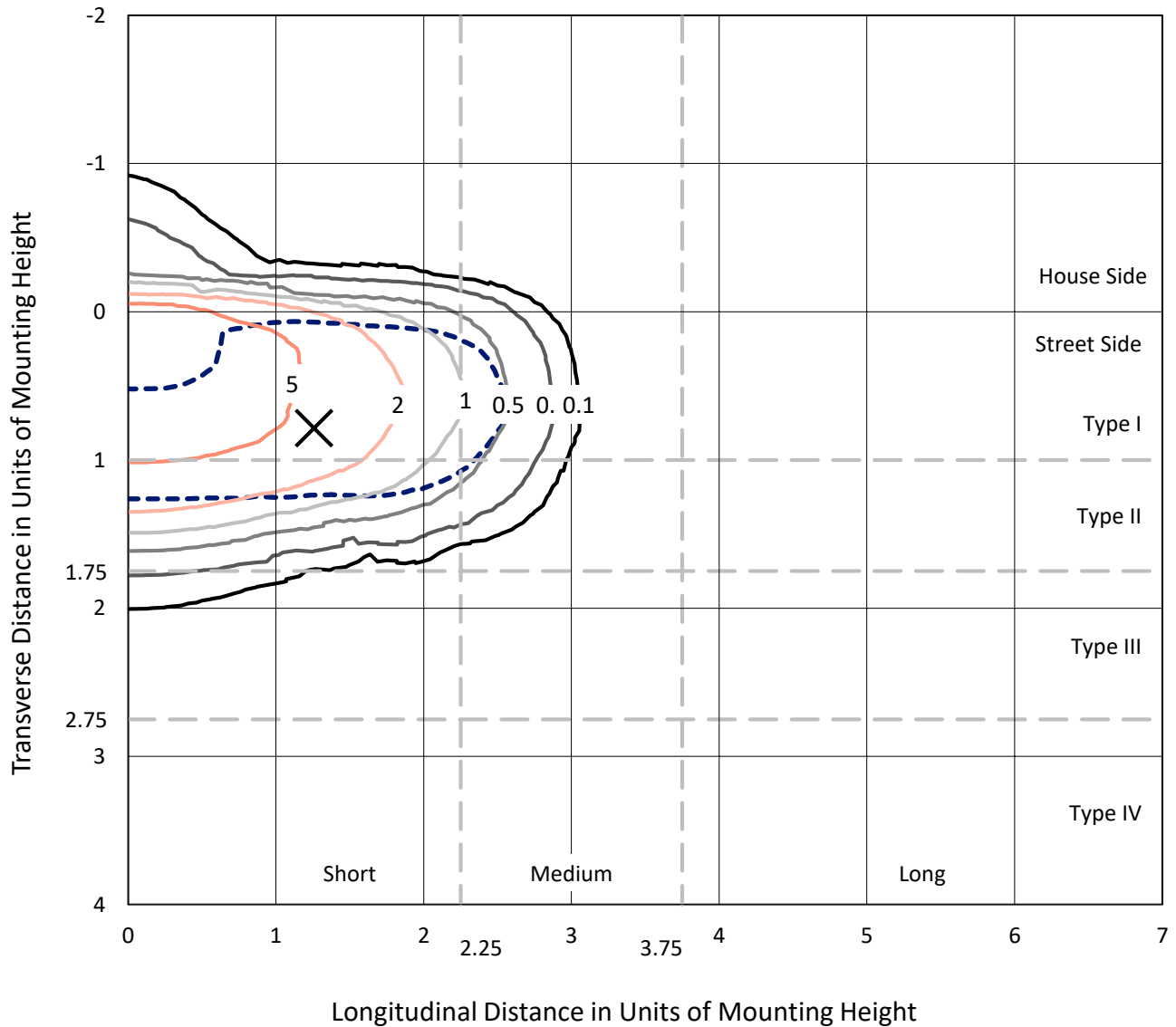


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

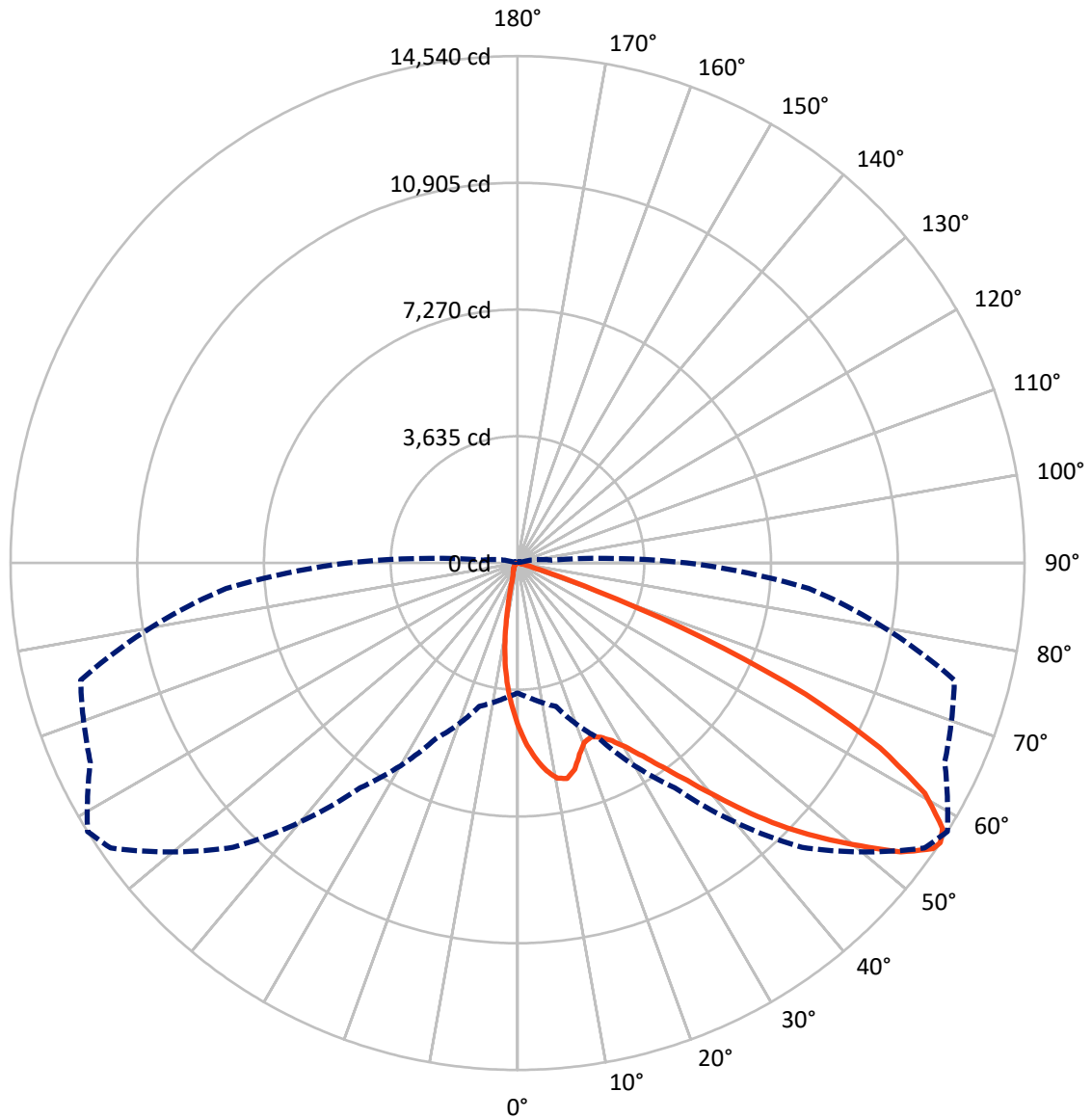


Based on 25 foot mounting height. Maximum calculated value = 9.4 fc
 Type II - Short - Full Cutoff

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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	1041.1	0.0	1041.1
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	15637.9	0.0	15637.9
	% Fixture	93.8	0.0	93.8
Total	Lumens	16679.0	0.0	16679.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	402.8	2.4
10°-20°	937.4	5.6
20°-30°	1577.2	9.5
30°-40°	2700.9	16.2
40°-50°	4075.7	24.4
50°-60°	4236.5	25.4
60°-70°	2378.3	14.3
70°-80°	326.0	2.0
80°-90°	44.2	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°	16679.0	100.0
0°-180°	16679.0	100.0

Coefficient of Utilization



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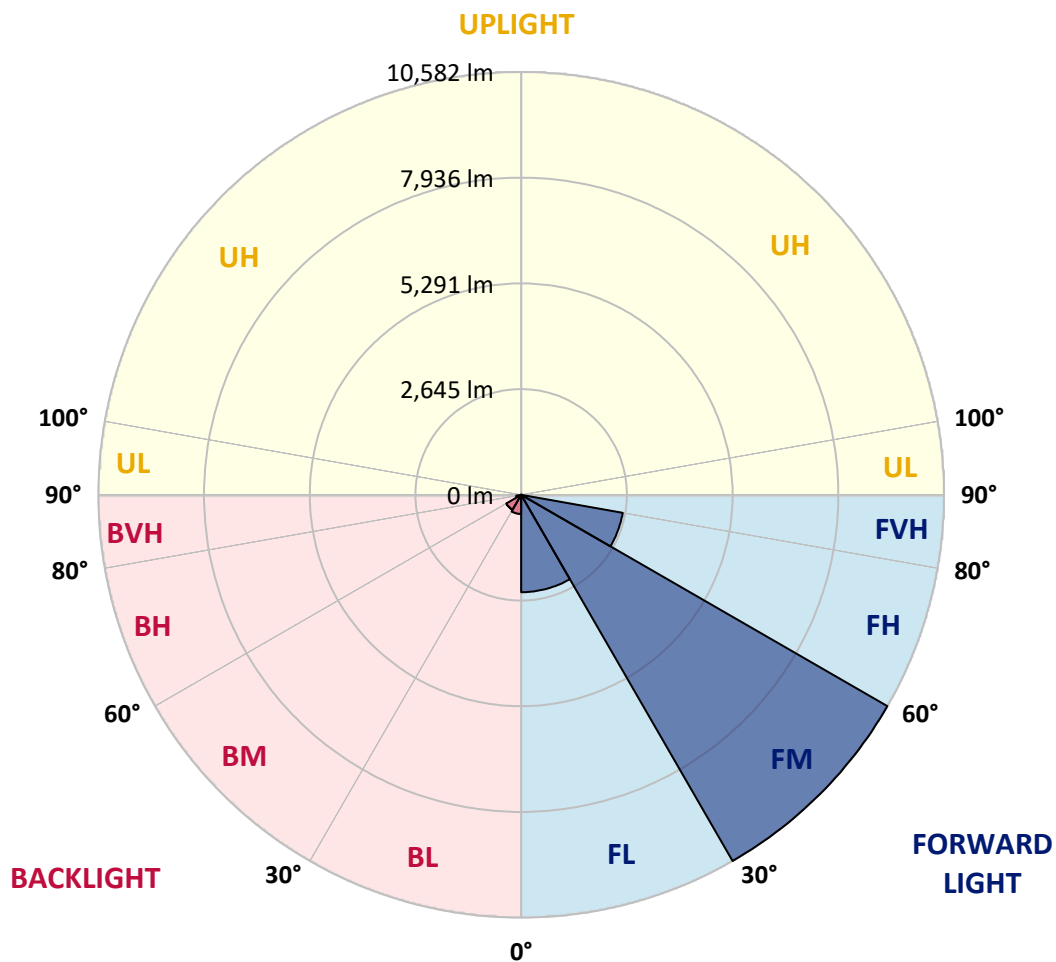
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2437.2	14.6			
FM	(30°-60°)	10581.9	63.4			
FH	(60°-80°)	2580.8	15.5			G2/5000
FVH	(80°-90°)	38.1	0.2			G1/100
BL	(0°-30°)	480.3	2.9	B1/500		
BM	(30°-60°)	431.2	2.6	B1/1000		
BH	(60°-80°)	123.5	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°	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3
2.5°	5681.8	5647.5	5611.8	5545.7	5484.6	5390.4	5260.6	5228.8	5127.0	4959.0	4802.5
5°	6171.7	6165.4	6141.2	6087.7	6021.6	5907.0	5760.7	5662.7	5504.9	5240.2	4938.7
7.5°	5881.6	5935.0	6022.8	6147.6	6231.5	6220.1	6108.1	6022.8	5866.3	5504.9	5072.3
10°	4957.7	4967.9	5088.8	5351.0	5765.8	6152.6	6299.0	6276.1	6132.3	5736.5	5189.3
12.5°	4632.0	4638.3	4666.3	4750.3	5020.1	5559.6	6222.6	6342.2	6330.8	5957.9	5314.1
15°	4657.4	4661.2	4668.9	4695.6	4772.0	5043.0	5835.8	6139.9	6458.0	6167.9	5436.2
17.5°	4858.5	4855.9	4831.8	4806.3	4830.5	4919.6	5441.3	5762.0	6431.3	6344.8	5536.7
20°	5250.4	5263.2	5181.7	5068.5	5009.9	5013.7	5246.6	5487.1	6281.2	6482.2	5611.8
22.5°	5801.4	5810.3	5676.7	5480.8	5309.0	5222.4	5287.3	5414.6	6108.1	6609.5	5672.9
25°	6459.3	6459.3	6272.3	5993.6	5727.6	5538.0	5482.0	5530.4	6041.9	6753.3	5734.0
27.5°	7169.4	7194.8	6950.5	6585.3	6234.1	5956.7	5781.1	5772.2	6092.8	6934.0	5802.7
30°	7941.8	7964.7	7674.6	7227.9	6811.8	6456.8	6187.0	6128.5	6287.5	7177.0	5903.2
32.5°	8710.4	8729.5	8408.8	7953.3	7468.4	7051.0	6696.0	6603.1	6637.5	7532.1	6050.8
35°	9687.7	9691.5	9285.6	8743.5	8225.6	7735.7	7286.5	7194.8	7156.7	7980.0	6263.4
37.5°	10465.2	10434.7	10177.6	9664.8	9070.5	8559.0	8030.9	7911.3	7819.6	8609.9	6592.9
40°	10648.5	10648.5	10610.3	10456.3	9984.2	9491.7	8980.2	8802.0	8599.7	9351.8	7035.8
42.5°	10171.3	10201.8	10453.8	10788.4	10792.3	10476.7	9976.6	9826.4	9470.1	10196.7	7519.3
45°	9103.6	9112.5	9717.0	10620.5	11233.8	11414.5	11045.5	10838.1	10344.3	11074.8	7962.2
47.5°	8719.3	8747.3	9004.4	10108.9	11266.9	12174.2	12071.1	11786.1	11153.7	11876.4	8375.7
50°	8128.9	8163.2	8477.5	9355.6	10969.1	12661.6	13052.3	12746.9	11890.4	12544.5	8580.6
52.5°	6716.4	6769.8	7213.9	8359.2	10224.7	12682.0	13950.7	13767.4	12645.1	12902.1	8556.4
55°	4621.8	4661.2	5179.2	6525.5	8723.1	12059.7	14337.5	14463.5	13318.2	12982.3	8439.4
56°	3728.5	3876.1	4255.3	5559.6	7868.0	11530.3	14248.4	14539.8	13518.0	12969.5	8388.5
57.5°	2464.9	2492.9	2906.4	4028.8	6318.1	10381.2	13846.3	14377.0	13775.1	12904.6	8351.6
60°	1159.3	1172.0	1320.9	1859.2	3419.3	7565.1	12539.4	13420.0	13869.2	12768.5	8350.3
62.5°	755.9	758.4	776.2	886.9	1398.5	4120.4	10395.2	11662.7	13089.2	12753.2	8326.1
65°	622.3	628.6	607.0	621.0	731.7	1553.7	7332.3	9092.2	11258.0	12394.4	8053.8
67.5°	548.5	549.7	520.5	503.9	535.7	682.1	3694.1	5735.3	8420.3	10531.4	6633.7
70°	500.1	498.8	465.7	427.6	428.8	453.0	1203.8	2382.2	4658.7	6253.2	3808.7
72.5°	444.1	446.7	427.6	374.1	356.3	320.7	453.0	642.6	1585.6	2008.0	1004.0
75°	389.4	384.3	365.2	330.9	297.8	215.1	227.8	273.6	413.6	409.8	216.3
77.5°	295.2	290.1	299.0	282.5	232.9	150.2	124.7	142.5	187.1	174.3	87.8
80°	225.2	222.7	203.6	241.8	212.5	113.3	85.3	87.8	101.8	92.9	43.3
82.5°	162.9	161.6	154.0	148.9	134.9	82.7	64.9	68.7	76.4	64.9	31.8
85°	62.4	62.4	120.9	101.8	92.9	56.0	45.8	49.6	58.5	47.1	21.6
87.5°	10.2	10.2	81.4	67.4	42.0	28.0	29.3	31.8	34.4	28.0	16.5
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°	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3	4722.3
2.5°	4709.6	4624.3	4437.3	4256.6	4098.8	3925.7	3837.9	3736.1	3697.9	3621.6	3629.2
5°	4758.0	4579.8	4204.4	3808.7	3446.0	3077.0	2814.8	2567.9	2430.5	2294.4	2294.4
7.5°	4807.6	4535.3	3955.0	3322.6	2711.7	2079.3	1631.4	1272.5	1072.7	939.1	935.3
10°	4841.9	4478.0	3671.2	2758.8	1857.9	1071.5	646.4	509.0	459.4	437.7	436.5
12.5°	4886.5	4420.7	3348.0	2094.6	1032.0	509.0	403.4	381.8	372.8	367.8	367.8
15°	4924.7	4339.3	2956.1	1408.7	542.1	381.8	347.4	339.8	338.5	337.2	338.5
17.5°	4933.6	4223.5	2486.5	824.6	393.2	333.4	318.1	311.8	311.8	310.5	310.5
20°	4913.2	4070.8	1967.3	509.0	339.8	306.7	290.1	282.5	281.2	281.2	281.2
22.5°	4871.2	3876.1	1454.5	385.6	309.2	282.5	260.9	253.2	253.2	254.5	255.8
25°	4819.0	3645.8	998.9	332.1	286.3	257.0	235.4	227.8	230.3	232.9	234.1
27.5°	4752.9	3370.9	654.1	287.6	255.8	231.6	212.5	207.4	212.5	217.6	220.1
30°	4686.7	3069.3	442.8	249.4	221.4	203.6	192.2	190.9	198.5	210.0	211.2
32.5°	4643.4	2760.1	334.7	224.0	194.7	179.4	174.3	176.9	188.3	201.1	203.6
35°	4639.6	2458.5	285.0	203.6	176.9	162.9	160.3	168.0	180.7	190.9	193.4
37.5°	4699.4	2176.0	258.3	188.3	162.9	148.9	145.1	159.1	170.5	180.7	183.2
40°	4820.3	1922.8	240.5	174.3	151.4	134.9	132.3	143.8	155.2	166.7	170.5
42.5°	4971.7	1686.1	220.1	160.3	138.7	119.6	117.1	126.0	137.4	154.0	156.5
45°	5102.8	1465.9	198.5	145.1	124.7	103.1	101.8	112.0	120.9	136.2	138.7
47.5°	5213.5	1282.7	178.2	128.5	106.9	91.6	90.3	95.4	100.5	114.5	117.1
50°	5155.0	1127.5	157.8	105.6	86.5	78.9	77.6	77.6	84.0	98.0	100.5
52.5°	5011.2	1030.7	138.7	87.8	71.3	67.4	63.6	64.9	71.3	77.6	78.9
55°	4895.4	984.9	122.2	77.6	59.8	56.0	52.2	50.9	52.2	49.6	47.1
56°	4867.4	979.8	118.3	75.1	57.3	52.2	47.1	44.5	43.3	38.2	36.9
57.5°	4854.7	979.8	112.0	70.0	53.4	47.1	40.7	35.6	30.5	26.7	26.7
60°	4844.5	986.2	104.3	61.1	45.8	38.2	29.3	21.6	17.8	17.8	17.8
62.5°	4822.9	983.7	95.4	50.9	39.4	29.3	17.8	14.0	12.7	14.0	15.3
65°	4579.8	913.7	84.0	40.7	30.5	20.4	10.2	10.2	11.5	14.0	15.3
67.5°	3690.3	692.3	68.7	31.8	21.6	15.3	8.9	8.9	11.5	14.0	15.3
70°	2027.1	365.2	58.5	22.9	16.5	12.7	8.9	7.6	11.5	14.0	15.3
72.5°	495.0	152.7	53.4	17.8	15.3	11.5	7.6	7.6	11.5	14.0	15.3
75°	122.2	114.5	43.3	14.0	12.7	10.2	7.6	7.6	11.5	14.0	15.3
77.5°	57.3	151.4	29.3	12.7	11.5	8.9	7.6	7.6	11.5	14.0	14.0
80°	34.4	114.5	17.8	11.5	10.2	8.9	7.6	7.6	11.5	14.0	15.3
82.5°	20.4	33.1	12.7	11.5	10.2	7.6	7.6	7.6	11.5	14.0	15.3
85°	17.8	16.5	12.7	11.5	10.2	8.9	7.6	7.6	12.7	15.3	15.3
87.5°	14.0	12.7	11.5	10.2	10.2	8.9	7.6	7.6	11.5	14.0	15.3
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)