

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: P196966

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196966
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-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 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: 18331 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 258
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

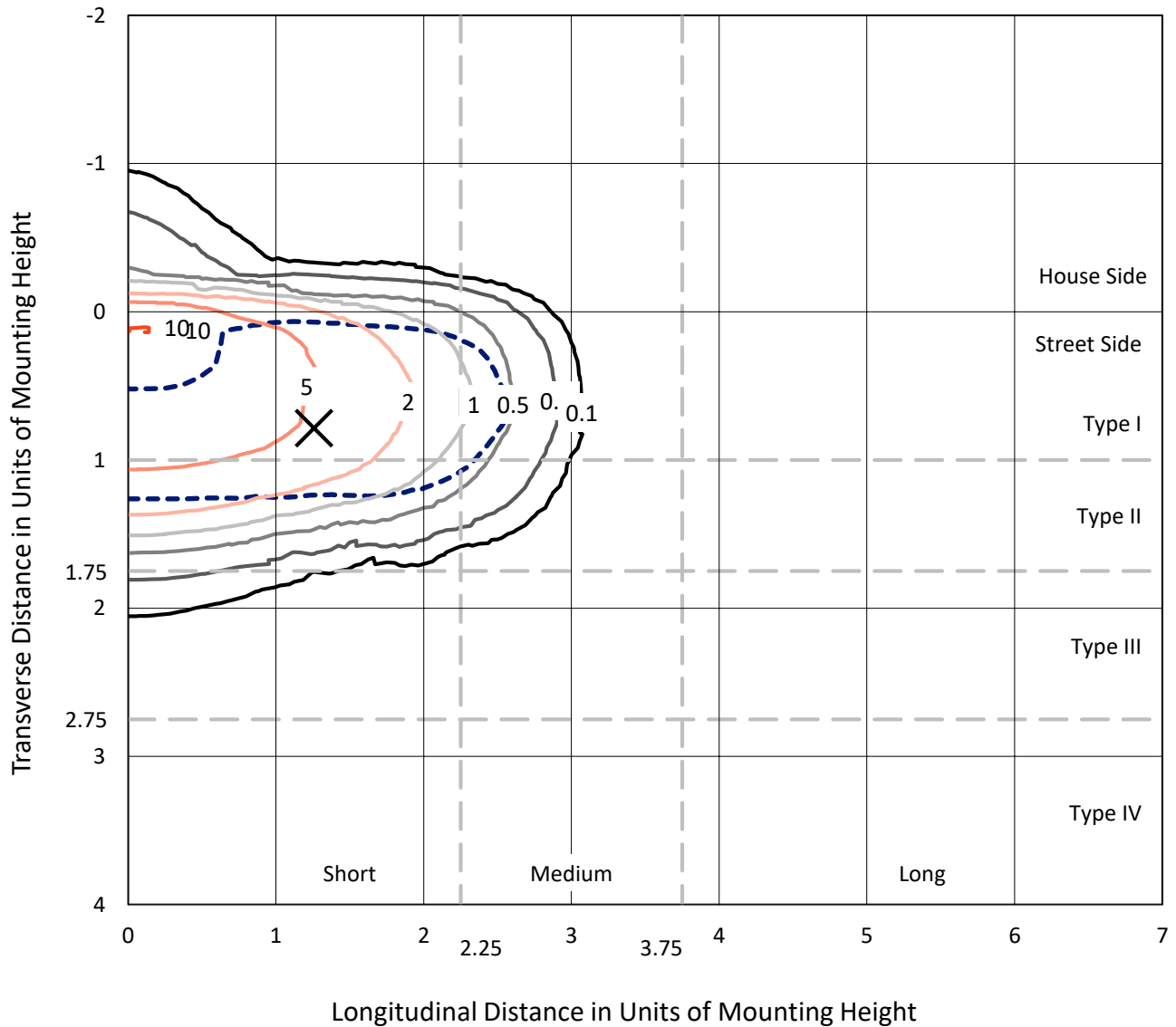


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

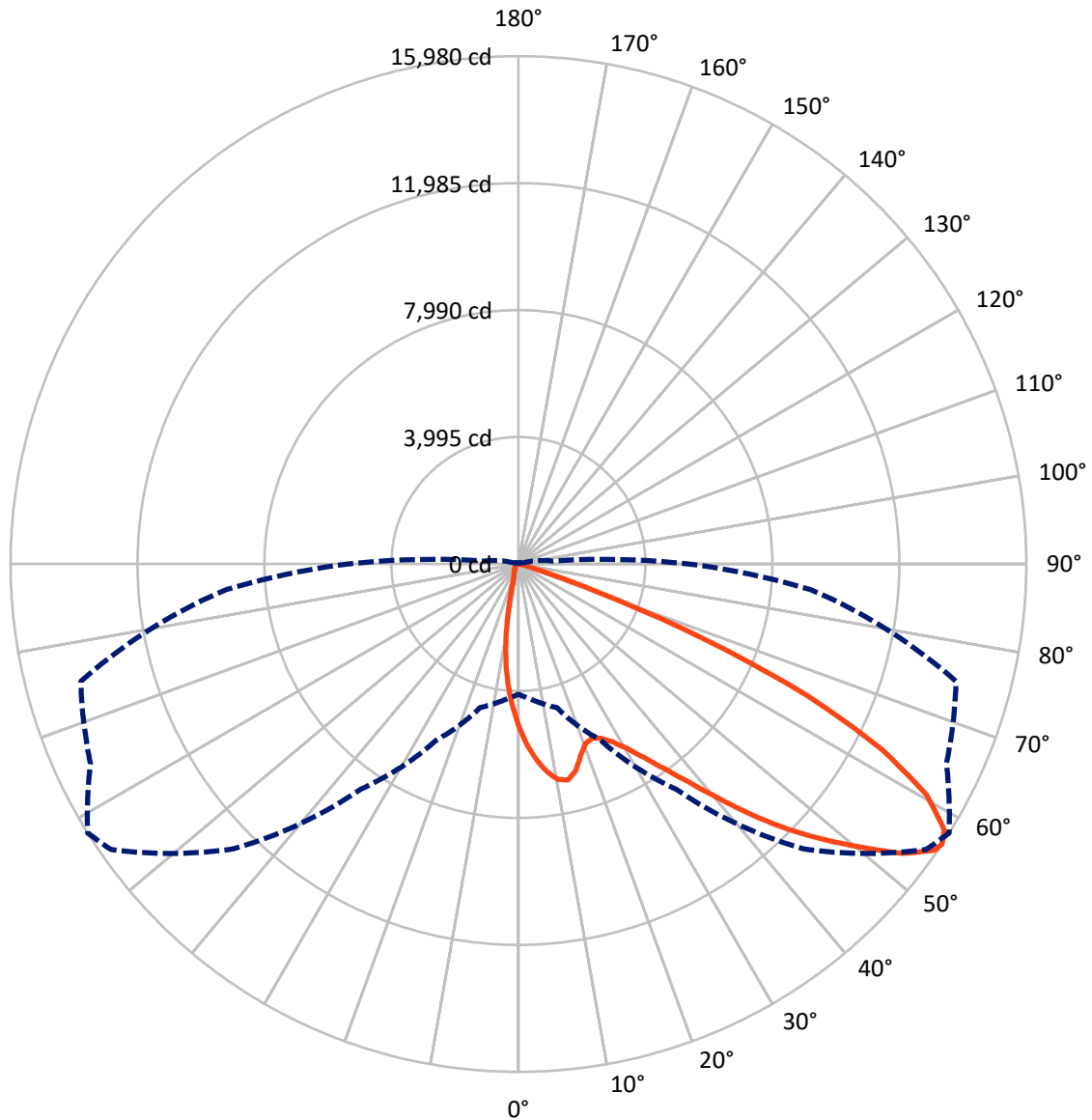


Based on 25 foot mounting height. Maximum calculated value = 10.3 fc
 Type II - Short - Full Cutoff

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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	1144.2	0.0	1144.2
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	17186.8	0.0	17186.8
	% Fixture	93.8	0.0	93.8
Total	Lumens	18331.0	0.0	18331.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	442.7	2.4
10°-20°	1030.2	5.6
20°-30°	1733.5	9.5
30°-40°	2968.4	16.2
40°-50°	4479.4	24.4
50°-60°	4656.1	25.4
60°-70°	2613.9	14.3
70°-80°	358.3	2.0
80°-90°	48.5	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°	18331.0	100.0
0°-180°	18331.0	100.0



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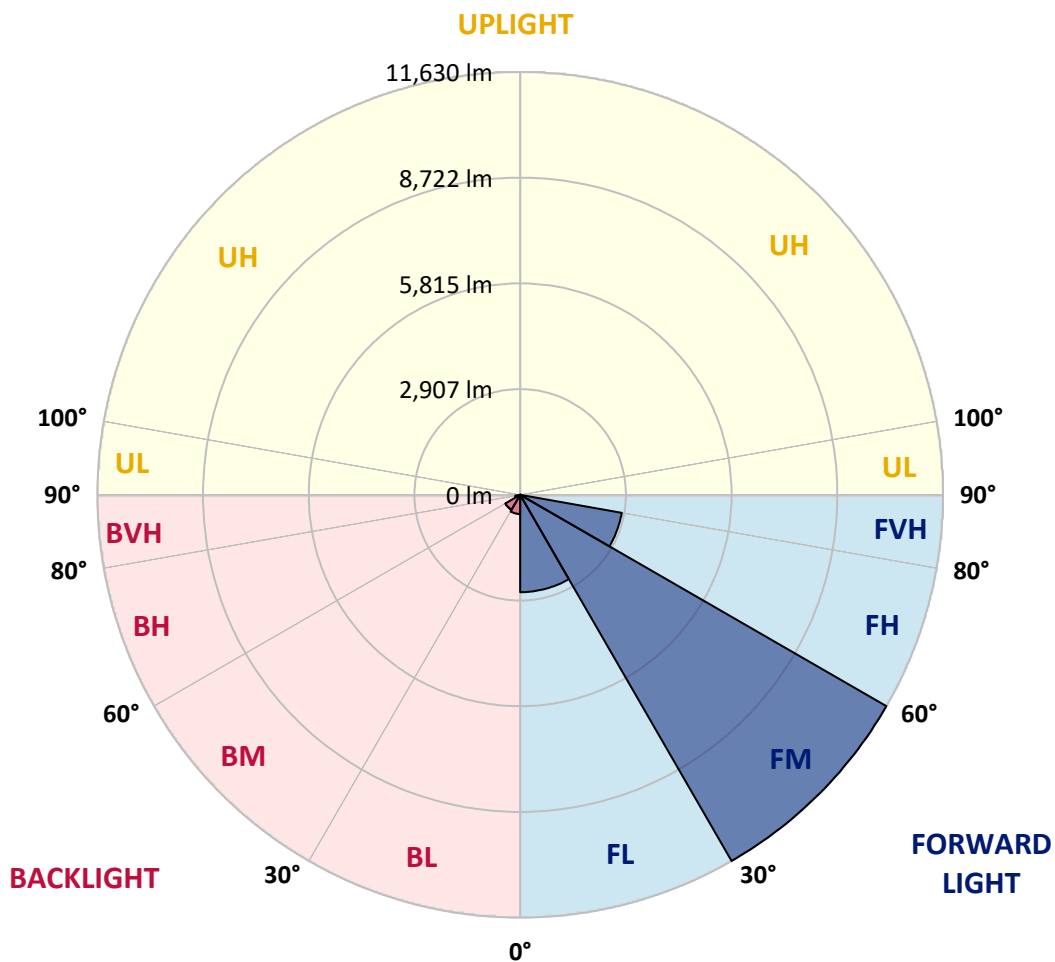
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2678.6	14.6			
FM (30°-60°)	11629.9	63.4			
FH (60°-80°)	2836.4	15.5			G2/5000
FVH (80°-90°)	41.8	0.2			G1/100
BL (0°-30°)	527.8	2.9	B2/1000		
BM (30°-60°)	474.0	2.6	B1/1000		
BH (60°-80°)	135.7	0.7	B1/500		G1/500
BVH (80°-90°)	6.7	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1
2.5°	6244.6	6206.8	6167.7	6094.9	6027.8	5924.3	5781.7	5746.7	5634.8	5450.2	5278.2
5°	6783.0	6776.0	6749.5	6690.7	6618.0	6492.1	6331.3	6223.6	6050.2	5759.3	5427.8
7.5°	6464.1	6522.9	6619.4	6756.4	6848.8	6836.2	6713.1	6619.4	6447.4	6050.2	5574.7
10°	5448.8	5460.0	5592.8	5880.9	6336.9	6762.0	6922.9	6897.7	6739.7	6304.7	5703.3
12.5°	5090.8	5097.8	5128.5	5220.8	5517.3	6110.3	6839.0	6970.4	6957.8	6548.1	5840.4
15°	5118.7	5122.9	5131.3	5160.7	5244.6	5542.5	6413.8	6748.1	7097.7	6778.8	5974.7
17.5°	5339.7	5336.9	5310.3	5282.4	5308.9	5406.8	5980.2	6332.7	7068.3	6973.2	6085.1
20°	5770.5	5784.4	5694.9	5570.5	5506.1	5510.3	5766.3	6030.6	6903.3	7124.3	6167.7
22.5°	6376.0	6385.8	6239.0	6023.6	5834.8	5739.7	5811.0	5950.9	6713.1	7264.1	6234.8
25°	7099.1	7099.1	6893.5	6587.2	6294.9	6086.5	6025.0	6078.1	6640.4	7422.2	6301.9
27.5°	7879.5	7907.5	7638.9	7237.6	6851.6	6546.7	6353.7	6343.9	6696.3	7620.8	6377.4
30°	8728.4	8753.6	8434.7	7943.8	7486.5	7096.3	6799.8	6735.5	6910.3	7887.9	6487.9
32.5°	9573.2	9594.1	9241.7	8741.0	8208.2	7749.4	7359.2	7257.1	7294.9	8278.1	6650.2
35°	10647.2	10651.4	10205.3	9609.5	9040.3	8501.9	8008.2	7907.5	7865.5	8770.4	6883.7
37.5°	11501.8	11468.2	11185.7	10622.1	9968.9	9406.7	8826.3	8694.9	8594.2	9462.7	7245.9
40°	11703.2	11703.2	11661.2	11492.0	10973.1	10431.9	9869.6	9673.8	9451.5	10278.0	7732.6
42.5°	11178.7	11212.3	11489.2	11857.0	11861.2	11514.4	10964.7	10799.7	10408.1	11206.7	8264.1
45°	10005.3	10015.1	10679.4	11672.4	12346.5	12545.1	12139.5	11911.5	11368.9	12171.7	8750.8
47.5°	9582.9	9613.7	9896.2	11110.2	12382.9	13380.0	13266.8	12953.5	12258.4	13052.8	9205.3
50°	8934.0	8971.8	9317.2	10282.2	12055.6	13915.7	14345.0	14009.4	13068.2	13787.0	9430.5
52.5°	7381.6	7440.3	7928.4	9187.1	11237.4	13938.1	15332.4	15131.0	13897.5	14180.0	9403.9
55°	5079.6	5122.9	5692.1	7171.8	9587.1	13254.2	15757.6	15896.0	14637.3	14268.1	9275.3
56°	4097.8	4260.0	4676.8	6110.3	8647.3	12672.4	15659.7	15980.0	14856.9	14254.1	9219.3
57.5°	2709.0	2739.8	3194.3	4427.8	6943.9	11409.5	15217.7	15800.9	15139.4	14182.8	9178.8
60°	1274.1	1288.1	1451.7	2043.3	3757.9	8314.4	13781.4	14749.2	15242.9	14033.2	9177.4
62.5°	830.7	833.5	853.1	974.8	1537.0	4528.5	11424.8	12817.8	14385.6	14016.4	9150.8
65°	683.9	690.9	667.1	682.5	804.2	1707.6	8058.5	9992.7	12373.1	13622.0	8851.5
67.5°	602.8	604.2	572.0	553.8	588.8	749.6	4060.0	6303.3	9254.3	11574.5	7290.7
70°	549.6	548.2	511.9	469.9	471.3	497.9	1323.0	2618.1	5120.1	6872.5	4185.9
72.5°	488.1	490.9	469.9	411.2	391.6	352.4	497.9	706.3	1742.6	2206.9	1103.5
75°	428.0	422.4	401.4	363.6	327.3	236.4	250.3	300.7	454.5	450.3	237.8
77.5°	324.5	318.9	328.7	310.5	255.9	165.0	137.1	156.6	205.6	191.6	96.5
80°	247.5	244.7	223.8	265.7	233.6	124.5	93.7	96.5	111.9	102.1	47.6
82.5°	179.0	177.6	169.2	163.6	148.2	90.9	71.3	75.5	83.9	71.3	35.0
85°	68.5	68.5	132.9	111.9	102.1	61.5	50.3	54.5	64.3	51.7	23.8
87.5°	11.2	11.2	89.5	74.1	46.2	30.8	32.2	35.0	37.8	30.8	18.2
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°	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1	5190.1
2.5°	5176.1	5082.4	4876.8	4678.2	4504.8	4314.6	4218.1	4106.2	4064.2	3980.3	3988.7
5°	5229.2	5033.4	4620.8	4185.9	3787.3	3381.7	3093.6	2822.3	2671.3	2521.6	2521.6
7.5°	5283.8	4984.5	4346.7	3651.6	2980.3	2285.2	1793.0	1398.6	1179.0	1032.1	1027.9
10°	5321.5	4921.5	4034.8	3032.1	2041.9	1177.6	710.5	559.4	504.9	481.1	479.7
12.5°	5370.5	4858.6	3679.6	2302.0	1134.2	559.4	443.3	419.6	409.8	404.2	404.2
15°	5412.4	4769.1	3248.9	1548.2	595.8	419.6	381.8	373.4	372.0	370.6	372.0
17.5°	5422.2	4641.8	2732.8	906.3	432.2	366.4	349.6	342.6	342.6	341.2	341.2
20°	5399.8	4474.0	2162.2	559.4	373.4	337.1	318.9	310.5	309.1	309.1	309.1
22.5°	5353.7	4260.0	1598.6	423.8	339.9	310.5	286.7	278.3	278.3	279.7	281.1
25°	5296.4	4006.9	1097.9	365.0	314.7	282.5	258.7	250.3	253.1	255.9	257.3
27.5°	5223.6	3704.8	718.9	316.1	281.1	254.5	233.6	228.0	233.6	239.2	242.0
30°	5150.9	3373.3	486.7	274.1	243.3	223.8	211.2	209.8	218.2	230.8	232.2
32.5°	5103.3	3033.5	367.8	246.1	214.0	197.2	191.6	194.4	207.0	221.0	223.8
35°	5099.2	2702.0	313.3	223.8	194.4	179.0	176.2	184.6	198.6	209.8	212.6
37.5°	5164.9	2391.5	283.9	207.0	179.0	163.6	159.4	174.8	187.4	198.6	201.4
40°	5297.7	2113.2	264.3	191.6	166.4	148.2	145.5	158.0	170.6	183.2	187.4
42.5°	5464.2	1853.1	242.0	176.2	152.4	131.5	128.7	138.5	151.0	169.2	172.0
45°	5608.2	1611.1	218.2	159.4	137.1	113.3	111.9	123.1	132.9	149.6	152.4
47.5°	5729.9	1409.7	195.8	141.3	117.5	100.7	99.3	104.9	110.5	125.9	128.7
50°	5665.6	1239.1	173.4	116.1	95.1	86.7	85.3	85.3	92.3	107.7	110.5
52.5°	5507.5	1132.8	152.4	96.5	78.3	74.1	69.9	71.3	78.3	85.3	86.7
55°	5380.3	1082.5	134.3	85.3	65.7	61.5	57.3	55.9	57.3	54.5	51.7
56°	5349.5	1076.9	130.1	82.5	62.9	57.3	51.7	48.9	47.6	42.0	40.6
57.5°	5335.5	1076.9	123.1	76.9	58.7	51.7	44.8	39.2	33.6	29.4	29.4
60°	5324.3	1083.9	114.7	67.1	50.3	42.0	32.2	23.8	19.6	19.6	19.6
62.5°	5300.5	1081.1	104.9	55.9	43.4	32.2	19.6	15.4	14.0	15.4	16.8
65°	5033.4	1004.2	92.3	44.8	33.6	22.4	11.2	11.2	12.6	15.4	16.8
67.5°	4055.8	760.8	75.5	35.0	23.8	16.8	9.8	9.8	12.6	15.4	16.8
70°	2227.9	401.4	64.3	25.2	18.2	14.0	9.8	8.4	12.6	15.4	16.8
72.5°	544.0	167.8	58.7	19.6	16.8	12.6	8.4	8.4	12.6	15.4	16.8
75°	134.3	125.9	47.6	15.4	14.0	11.2	8.4	8.4	12.6	15.4	16.8
77.5°	62.9	166.4	32.2	14.0	12.6	9.8	8.4	8.4	12.6	15.4	15.4
80°	37.8	125.9	19.6	12.6	11.2	9.8	8.4	8.4	12.6	15.4	16.8
82.5°	22.4	36.4	14.0	12.6	11.2	8.4	8.4	8.4	12.6	15.4	16.8
85°	19.6	18.2	14.0	12.6	11.2	9.8	8.4	8.4	14.0	16.8	16.8
87.5°	15.4	14.0	12.6	11.2	11.2	9.8	8.4	8.4	12.6	15.4	16.8
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)