

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: P195516

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-7050-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195516
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-06-D-UNV-AFL-7050-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 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: 24428 lumens
Efficiency: N/A
Efficacy: 98.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 249
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

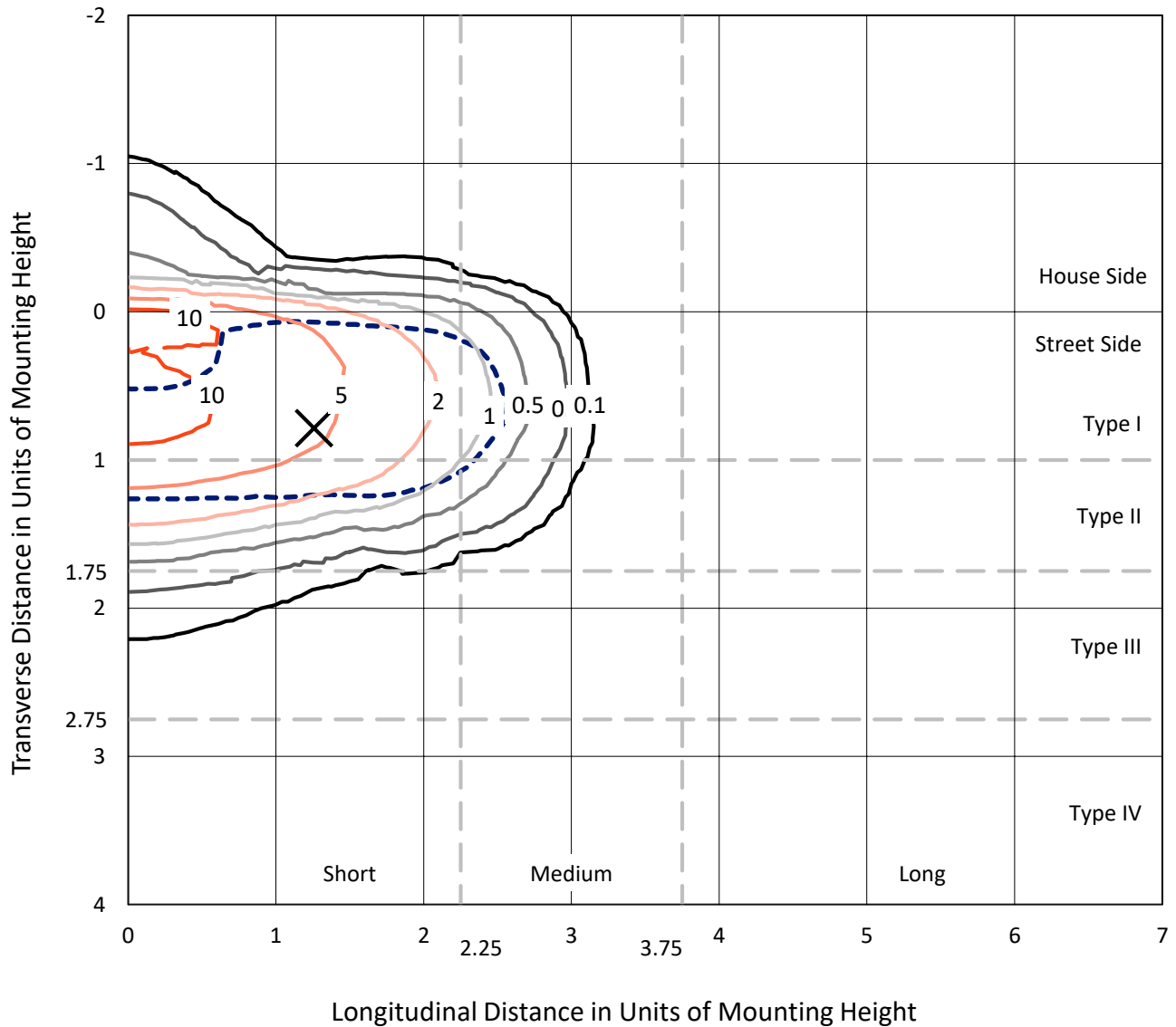


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

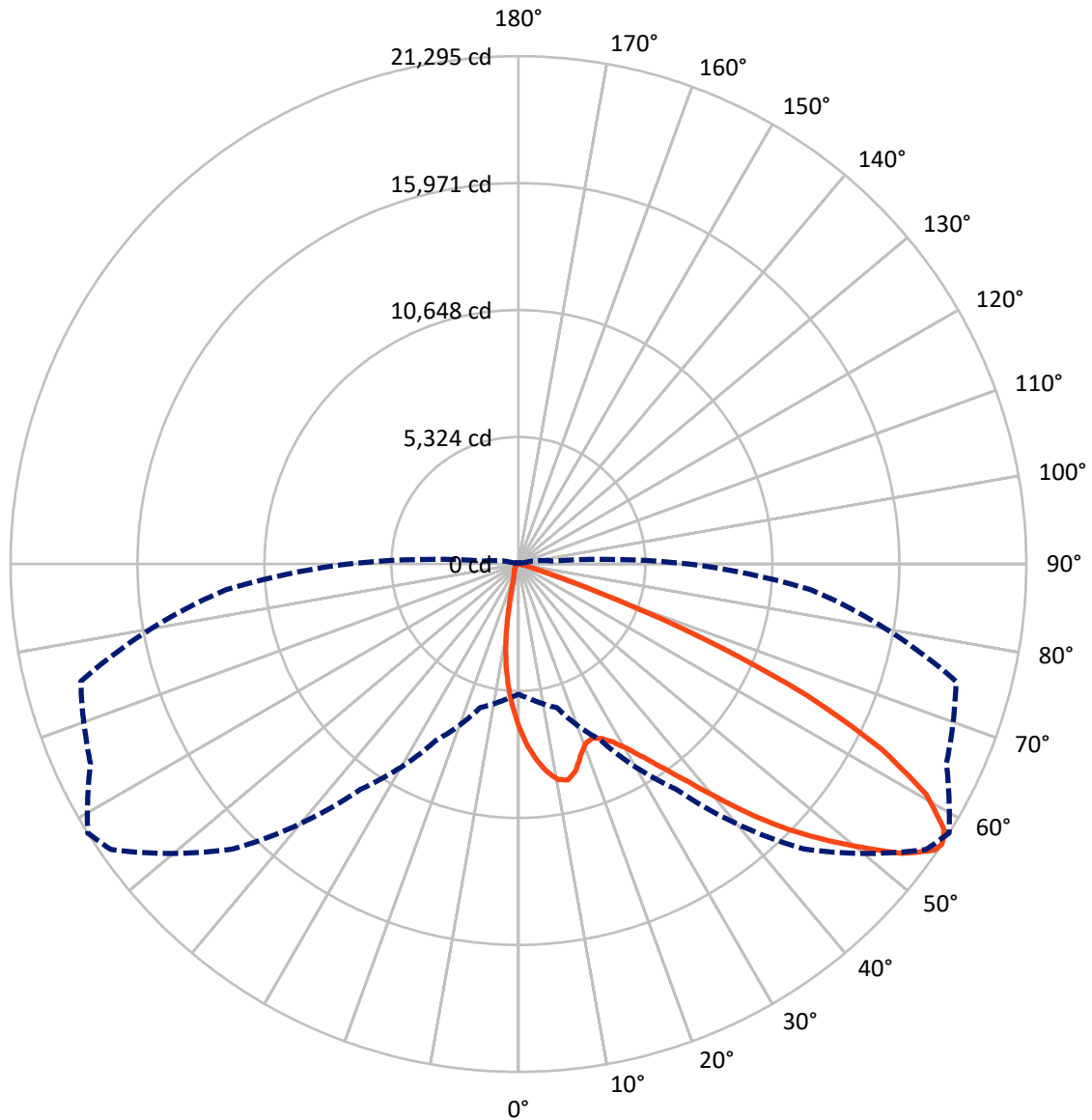


Based on 25 foot mounting height. Maximum calculated value = 13.8 fc
 Type II - Short - Full Cutoff

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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	1524.8	0.0	1524.8
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	22903.2	0.0	22903.2
	% Fixture	93.8	0.0	93.8
Total	Lumens	24428.0	0.0	24428.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	590.0	2.4
10°-20°	1372.8	5.6
20°-30°	2310.0	9.5
30°-40°	3955.7	16.2
40°-50°	5969.2	24.4
50°-60°	6204.8	25.4
60°-70°	3483.3	14.3
70°-80°	477.4	2.0
80°-90°	64.7	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°	24428.0	100.0
0°-180°	24428.0	100.0



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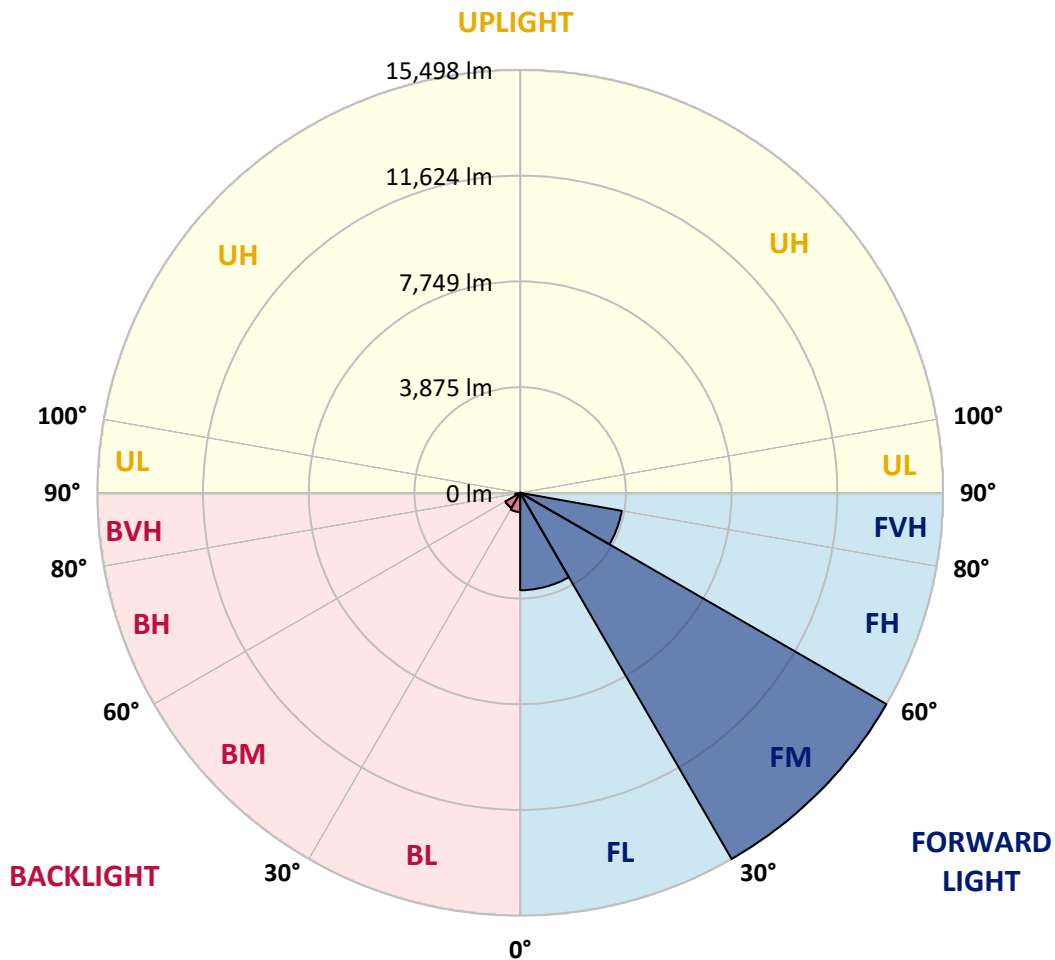
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3569.5	14.6			
FM	(30°-60°)	15498.1	63.4			
FH	(60°-80°)	3779.8	15.5			G2/5000
FVH	(80°-90°)	55.8	0.2			G1/100
BL	(0°-30°)	703.4	2.9	B2/1000		
BM	(30°-60°)	631.6	2.6	B1/1000		
BH	(60°-80°)	180.9	0.7	B1/500		G1/500
BVH	(80°-90°)	8.9	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3
2.5°	8321.6	8271.2	8219.1	8122.1	8032.7	7894.8	7704.7	7658.1	7509.0	7263.0	7033.7
5°	9039.1	9029.8	8994.4	8916.1	8819.2	8651.4	8437.1	8293.6	8062.5	7674.8	7233.1
7.5°	8614.2	8692.4	8821.0	9003.7	9126.7	9109.9	8945.9	8821.0	8591.8	8062.5	7428.8
10°	7261.1	7276.0	7453.1	7837.0	8444.6	9011.1	9225.5	9191.9	8981.3	8401.7	7600.3
12.5°	6784.0	6793.3	6834.3	6957.3	7352.4	8142.6	9113.6	9288.8	9272.1	8726.0	7782.9
15°	6821.3	6826.8	6838.0	6877.2	6989.0	7386.0	8547.1	8992.5	9458.4	9033.5	7961.9
17.5°	7115.7	7112.0	7076.6	7039.3	7074.7	7205.2	7969.3	8439.0	9419.3	9292.6	8109.1
20°	7689.8	7708.4	7589.1	7423.2	7337.5	7343.1	7684.2	8036.4	9199.4	9493.8	8219.1
22.5°	8496.7	8509.8	8314.1	8027.1	7775.5	7648.8	7743.8	7930.2	8945.9	9680.2	8308.5
25°	9460.3	9460.3	9186.3	8778.2	8388.7	8111.0	8029.0	8099.8	8849.0	9890.8	8398.0
27.5°	10500.3	10537.5	10179.7	9644.8	9130.4	8724.1	8466.9	8453.9	8923.5	10155.5	8498.6
30°	11631.5	11665.1	11240.2	10586.0	9976.6	9456.6	9061.5	8975.7	9208.7	10511.4	8645.8
32.5°	12757.2	12785.2	12315.5	11648.3	10938.2	10326.9	9807.0	9670.9	9721.2	11031.4	8862.0
35°	14188.6	14194.2	13599.6	12805.7	12047.2	11329.6	10671.7	10537.5	10481.6	11687.5	9173.3
37.5°	15327.3	15282.6	14906.1	14155.0	13284.7	12535.5	11762.0	11586.8	11452.6	12610.0	9656.0
40°	15595.7	15595.7	15539.8	15314.3	14622.8	13901.6	13152.3	12891.4	12595.1	13696.6	10304.6
42.5°	14896.8	14941.5	15310.6	15800.7	15806.3	15344.1	14611.7	14391.7	13869.9	14934.1	11012.8
45°	13333.1	13346.2	14231.4	15554.7	16453.0	16717.7	16177.2	15873.4	15150.3	16220.1	11661.4
47.5°	12770.3	12811.3	13187.8	14805.5	16501.5	17830.3	17679.4	17261.9	16335.6	17394.2	12267.1
50°	11905.5	11955.8	12416.2	13702.2	16065.4	18544.1	19116.3	18669.0	17414.7	18372.7	12567.1
52.5°	9836.8	9915.0	10565.5	12242.8	14975.1	18573.9	20432.1	20163.7	18519.9	18896.4	12531.7
55°	6769.1	6826.8	7585.4	9557.2	12775.9	17662.6	20998.7	21183.2	19505.8	19013.8	12360.3
56°	5460.7	5676.9	6232.3	8142.6	11523.4	16887.3	20868.2	21295.0	19798.4	18995.1	12285.7
57.5°	3610.0	3651.0	4256.8	5900.6	9253.4	15204.3	20279.3	21056.4	20174.9	18900.1	12231.7
60°	1697.9	1716.5	1934.6	2722.9	5007.8	11079.9	18365.2	19654.9	20312.8	18700.7	12229.8
62.5°	1107.1	1110.8	1136.9	1299.0	2048.2	6034.8	15224.8	17081.1	19170.3	18678.3	12194.4
65°	911.4	920.7	889.0	909.5	1071.6	2275.6	10738.8	13316.4	16488.4	18152.7	11795.6
67.5°	803.3	805.1	762.3	738.0	784.6	999.0	5410.4	8399.8	12332.3	15424.2	9715.6
70°	732.4	730.6	682.1	626.2	628.1	663.5	1763.1	3488.9	6823.1	9158.4	5578.1
72.5°	650.4	654.2	626.2	547.9	521.8	469.7	663.5	941.2	2322.2	2941.0	1470.5
75°	570.3	562.8	534.9	484.6	436.1	315.0	333.6	400.7	605.7	600.1	316.8
77.5°	432.4	424.9	438.0	413.7	341.1	219.9	182.6	208.7	274.0	255.3	128.6
80°	329.9	326.2	298.2	354.1	311.2	165.9	124.9	128.6	149.1	136.1	63.4
82.5°	238.6	236.7	225.5	218.1	197.6	121.1	95.1	100.6	111.8	95.1	46.6
85°	91.3	91.3	177.1	149.1	136.1	82.0	67.1	72.7	85.7	69.0	31.7
87.5°	14.9	14.9	119.3	98.8	61.5	41.0	42.9	46.6	50.3	41.0	24.2
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°	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3	6916.3
2.5°	6897.7	6772.8	6498.8	6234.2	6003.1	5749.6	5621.0	5471.9	5416.0	5304.2	5315.4
5°	6968.5	6707.6	6157.8	5578.1	5047.0	4506.5	4122.6	3761.0	3559.7	3360.3	3360.3
7.5°	7041.2	6642.3	5792.5	4866.2	3971.6	3045.3	2389.3	1863.7	1571.1	1375.4	1369.8
10°	7091.5	6558.5	5376.9	4040.6	2721.0	1569.3	946.8	745.5	672.8	641.1	639.3
12.5°	7156.7	6474.6	4903.5	3067.7	1511.5	745.5	590.8	559.1	546.1	538.6	538.6
15°	7212.6	6355.3	4329.4	2063.2	793.9	559.1	508.8	497.6	495.8	493.9	495.8
17.5°	7225.7	6185.7	3641.7	1207.7	575.9	488.3	465.9	456.6	456.6	454.8	454.8
20°	7195.9	5962.1	2881.3	745.5	497.6	449.2	424.9	413.7	411.9	411.9	411.9
22.5°	7134.4	5676.9	2130.2	564.7	452.9	413.7	382.1	370.9	370.9	372.7	374.6
25°	7057.9	5339.6	1463.0	486.4	419.3	376.5	344.8	333.6	337.3	341.1	342.9
27.5°	6961.0	4937.0	958.0	421.2	374.6	339.2	311.2	303.8	311.2	318.7	322.4
30°	6864.1	4495.3	648.6	365.3	324.3	298.2	281.4	279.6	290.7	307.5	309.4
32.5°	6800.8	4042.4	490.2	328.0	285.2	262.8	255.3	259.1	275.8	294.5	298.2
35°	6795.2	3600.7	417.5	298.2	259.1	238.6	234.8	246.0	264.6	279.6	283.3
37.5°	6882.8	3187.0	378.3	275.8	238.6	218.1	212.5	233.0	249.7	264.6	268.4
40°	7059.8	2816.1	352.2	255.3	221.8	197.6	193.8	210.6	227.4	244.1	249.7
42.5°	7281.6	2469.4	322.4	234.8	203.1	175.2	171.5	184.5	201.3	225.5	229.2
45°	7473.6	2147.0	290.7	212.5	182.6	151.0	149.1	164.0	177.1	199.4	203.1
47.5°	7635.7	1878.6	260.9	188.2	156.6	134.2	132.3	139.8	147.2	167.7	171.5
50°	7550.0	1651.3	231.1	154.7	126.7	115.6	113.7	113.7	123.0	143.5	147.2
52.5°	7339.4	1509.6	203.1	128.6	104.4	98.8	93.2	95.1	104.4	113.7	115.6
55°	7169.8	1442.5	178.9	113.7	87.6	82.0	76.4	74.5	76.4	72.7	69.0
56°	7128.8	1435.1	173.3	110.0	83.9	76.4	69.0	65.2	63.4	55.9	54.0
57.5°	7110.1	1435.1	164.0	102.5	78.3	69.0	59.6	52.2	44.7	39.1	39.1
60°	7095.2	1444.4	152.8	89.5	67.1	55.9	42.9	31.7	26.1	26.1	26.1
62.5°	7063.5	1440.7	139.8	74.5	57.8	42.9	26.1	20.5	18.6	20.5	22.4
65°	6707.6	1338.2	123.0	59.6	44.7	29.8	14.9	14.9	16.8	20.5	22.4
67.5°	5404.8	1013.9	100.6	46.6	31.7	22.4	13.0	13.0	16.8	20.5	22.4
70°	2968.9	534.9	85.7	33.5	24.2	18.6	13.0	11.2	16.8	20.5	22.4
72.5°	725.0	223.6	78.3	26.1	22.4	16.8	11.2	11.2	16.8	20.5	22.4
75°	178.9	167.7	63.4	20.5	18.6	14.9	11.2	11.2	16.8	20.5	22.4
77.5°	83.9	221.8	42.9	18.6	16.8	13.0	11.2	11.2	16.8	20.5	20.5
80°	50.3	167.7	26.1	16.8	14.9	13.0	11.2	11.2	16.8	20.5	22.4
82.5°	29.8	48.5	18.6	16.8	14.9	11.2	11.2	11.2	16.8	20.5	22.4
85°	26.1	24.2	18.6	16.8	14.9	13.0	11.2	11.2	18.6	22.4	22.4
87.5°	20.5	18.6	16.8	14.9	14.9	13.0	11.2	11.2	16.8	20.5	22.4
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)