

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: P196960

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196960
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-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 1050mA 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: 16709 lumens
Efficiency: N/A
Efficacy: 74.3 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): 225
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

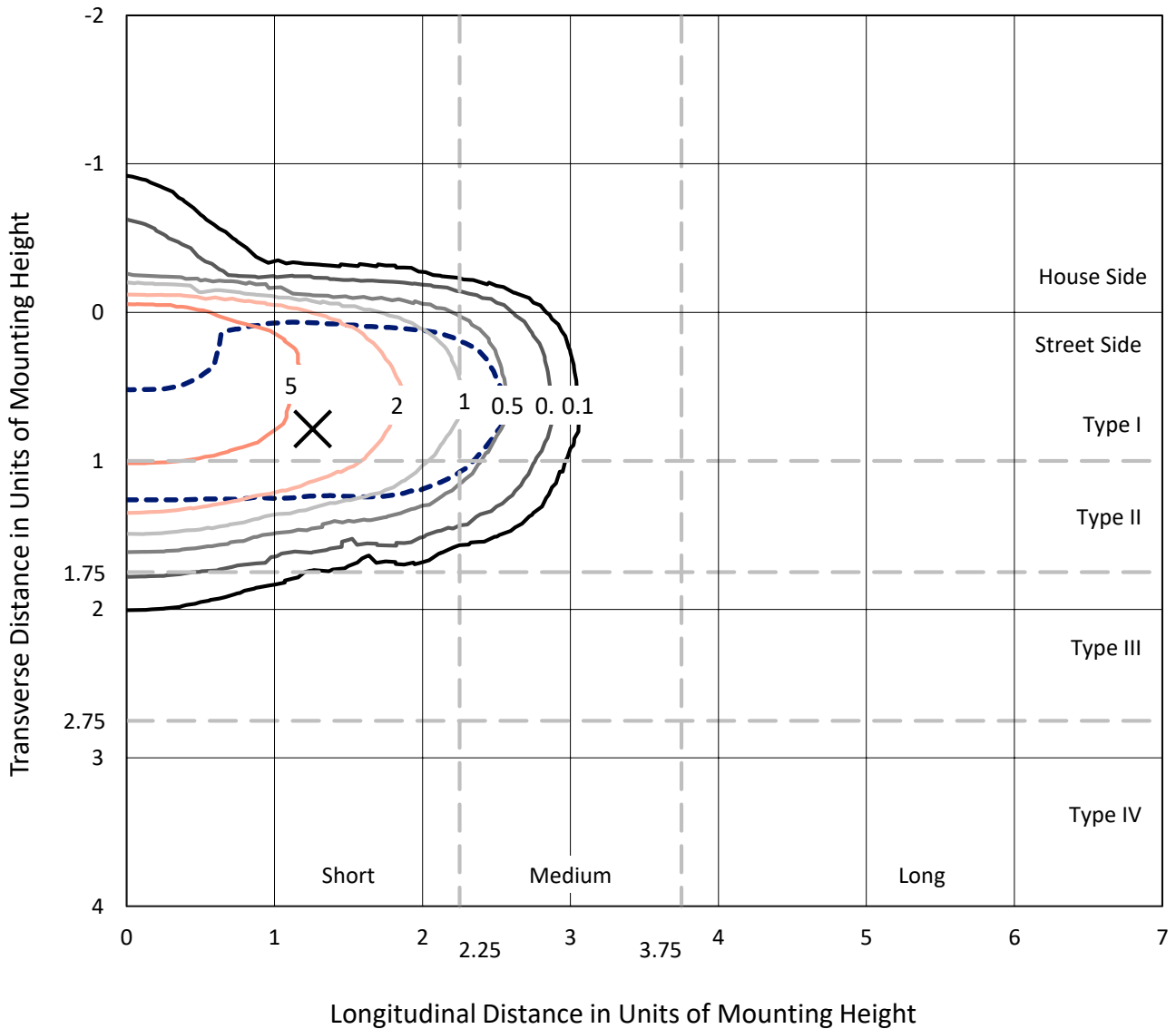


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Iso-Footcandle Lines of Horizontal Illumination

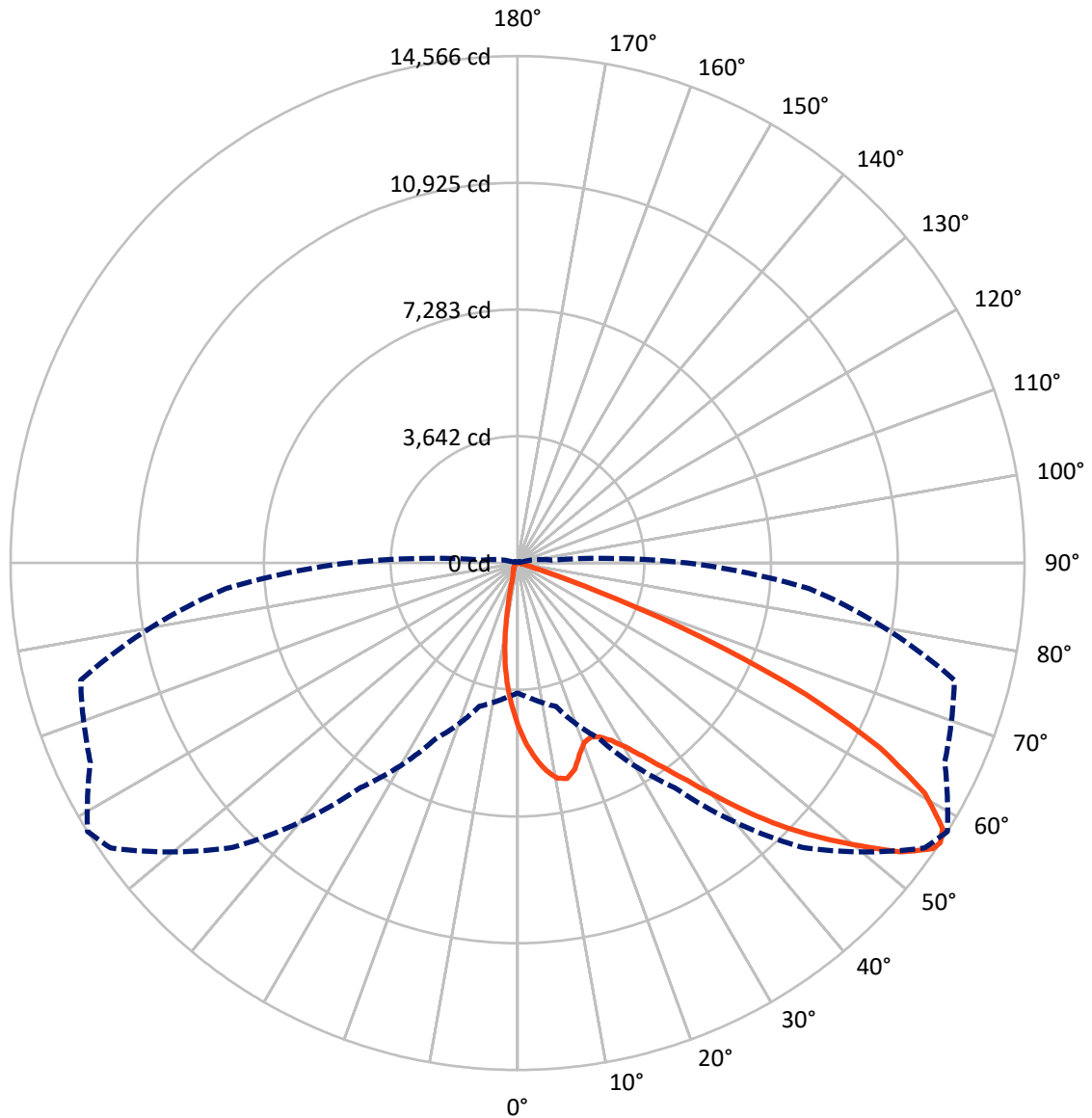
✕ Max cd
 - - - 1/2 Max cd



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	1043.0	0.0	1043.0
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	15666.0	0.0	15666.0
	% Fixture	93.8	0.0	93.8
Total	Lumens	16709.0	0.0	16709.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	403.6	2.4
10°-20°	939.0	5.6
20°-30°	1580.1	9.5
30°-40°	2705.7	16.2
40°-50°	4083.0	24.4
50°-60°	4244.2	25.4
60°-70°	2382.6	14.3
70°-80°	326.5	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°	16709.0	100.0
0°-180°	16709.0	100.0

Coefficient of Utilization



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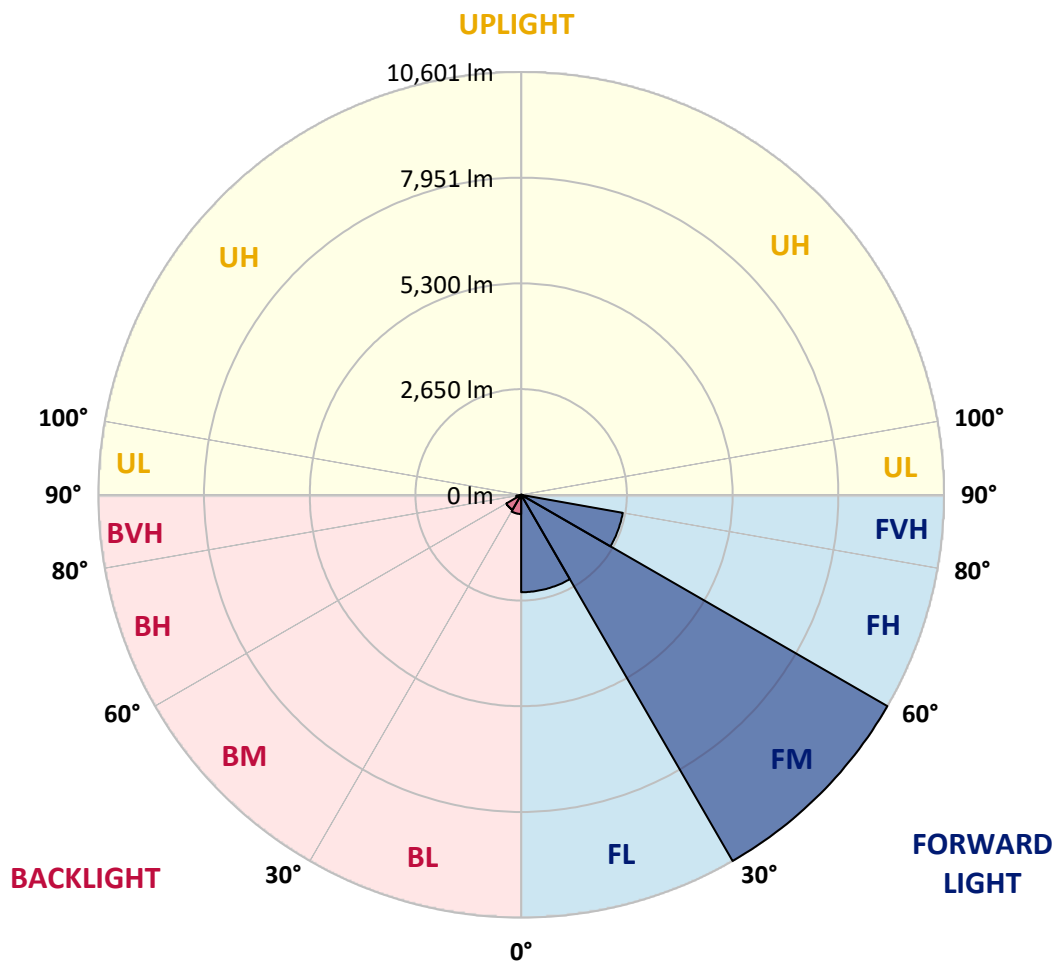
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2441.6	14.6			
FM	(30°-60°)	10600.9	63.4			
FH	(60°-80°)	2585.4	15.5			G2/5000
FVH	(80°-90°)	38.1	0.2			G1/100
BL	(0°-30°)	481.1	2.9	B1/500		
BM	(30°-60°)	432.0	2.6	B1/1000		
BH	(60°-80°)	123.7	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°	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8
2.5°	5692.0	5657.6	5621.9	5555.6	5494.4	5400.1	5270.1	5238.2	5136.2	4967.9	4811.1
5°	6182.8	6176.5	6152.2	6098.7	6032.4	5917.7	5771.1	5672.9	5514.8	5249.7	4947.5
7.5°	5892.2	5945.7	6033.7	6158.6	6242.7	6231.3	6119.1	6033.7	5876.9	5514.8	5081.4
10°	4966.7	4976.9	5098.0	5360.6	5776.2	6163.7	6310.3	6287.4	6143.3	5746.8	5198.7
12.5°	4640.3	4646.7	4674.7	4758.9	5029.1	5569.6	6233.8	6353.7	6342.2	5968.7	5323.6
15°	4665.8	4669.6	4677.3	4704.1	4780.5	5052.1	5846.3	6151.0	6469.7	6179.0	5446.0
17.5°	4867.2	4864.7	4840.5	4815.0	4839.2	4928.4	5451.1	5772.3	6442.9	6356.2	5546.7
20°	5259.9	5272.6	5191.0	5077.6	5018.9	5022.8	5256.0	5497.0	6292.5	6493.9	5621.9
22.5°	5811.9	5820.8	5686.9	5490.6	5318.5	5231.8	5296.8	5424.3	6119.1	6621.4	5683.1
25°	6470.9	6470.9	6283.5	6004.4	5737.9	5548.0	5491.9	5540.3	6052.8	6765.4	5744.3
27.5°	7182.3	7207.8	6963.0	6597.1	6245.3	5967.4	5791.5	5782.5	6103.8	6946.4	5813.1
30°	7956.1	7979.0	7688.4	7240.9	6824.1	6468.4	6198.1	6139.5	6298.8	7189.9	5913.8
32.5°	8726.1	8745.2	8424.0	7967.6	7481.9	7063.7	6708.1	6615.0	6649.4	7545.6	6061.7
35°	9705.1	9709.0	9302.3	8759.2	8240.4	7749.6	7299.6	7207.8	7169.5	7994.3	6274.6
37.5°	10484.0	10453.4	10195.9	9682.2	9086.9	8574.4	8045.3	7925.5	7833.7	8625.4	6604.8
40°	10667.6	10667.6	10629.4	10475.1	10002.2	9508.8	8996.3	8817.9	8615.2	9368.6	7048.4
42.5°	10189.6	10220.2	10472.6	10807.8	10811.7	10495.5	9994.5	9844.1	9487.1	10215.1	7532.9
45°	9120.0	9128.9	9734.5	10639.6	11254.0	11435.1	11065.4	10857.6	10362.9	11094.7	7976.5
47.5°	8735.0	8763.1	9020.6	10127.1	11287.2	12196.1	12092.9	11807.3	11173.7	11897.8	8390.8
50°	8143.5	8177.9	8492.8	9372.4	10988.9	12684.4	13075.7	12769.8	11911.8	12567.1	8596.0
52.5°	6728.5	6782.0	7226.9	8374.2	10243.1	12704.8	13975.8	13792.2	12667.8	12925.3	8571.8
55°	4630.1	4669.6	5188.5	6537.2	8738.8	12081.4	14363.3	14489.5	13342.2	13005.6	8454.5
56°	3735.2	3883.1	4263.0	5569.6	7882.2	11551.1	14274.1	14566.0	13542.3	12992.9	8403.6
57.5°	2469.3	2497.4	2911.7	4036.1	6329.4	10399.9	13871.2	14402.8	13799.8	12927.9	8366.6
60°	1161.4	1174.1	1323.3	1862.5	3425.4	7578.8	12562.0	13444.2	13894.2	12791.5	8365.3
62.5°	757.2	759.8	777.6	888.5	1401.0	4127.8	10413.9	11683.6	13112.7	12776.2	8341.1
65°	623.4	629.8	608.1	622.1	733.0	1556.5	7345.5	9108.5	11278.3	12416.7	8068.3
67.5°	549.4	550.7	521.4	504.8	536.7	683.3	3700.8	5745.6	8435.4	10550.3	6645.6
70°	501.0	499.7	466.6	428.3	429.6	453.8	1206.0	2386.4	4667.1	6264.4	3815.5
72.5°	444.9	447.5	428.3	374.8	356.9	321.3	453.8	643.8	1588.4	2011.7	1005.8
75°	390.1	385.0	365.9	331.5	298.3	215.4	228.2	274.1	414.3	410.5	216.7
77.5°	295.8	290.7	299.6	283.0	233.3	150.4	124.9	142.8	187.4	174.6	88.0
80°	225.6	223.1	204.0	242.2	212.9	113.5	85.4	88.0	102.0	93.1	43.3
82.5°	163.2	161.9	154.3	149.2	135.1	82.9	65.0	68.8	76.5	65.0	31.9
85°	62.5	62.5	121.1	102.0	93.1	56.1	45.9	49.7	58.6	47.2	21.7
87.5°	10.2	10.2	81.6	67.6	42.1	28.0	29.3	31.9	34.4	28.0	16.6
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°	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8	4730.8
2.5°	4718.1	4632.7	4445.3	4264.2	4106.2	3932.8	3844.8	3742.8	3704.6	3628.1	3635.8
5°	4766.5	4588.0	4212.0	3815.5	3452.2	3082.5	2819.9	2572.6	2434.9	2298.5	2298.5
7.5°	4816.2	4543.4	3962.1	3328.5	2716.6	2083.0	1634.3	1274.8	1074.7	940.8	937.0
10°	4850.7	4486.1	3677.8	2763.8	1861.2	1073.4	647.6	509.9	460.2	438.5	437.3
12.5°	4895.3	4428.7	3354.0	2098.3	1033.9	509.9	404.1	382.4	373.5	368.4	368.4
15°	4933.5	4347.1	2961.4	1411.2	543.1	382.4	348.0	340.4	339.1	337.8	339.1
17.5°	4942.4	4231.1	2491.0	826.1	393.9	334.0	318.7	312.3	312.3	311.1	311.1
20°	4922.0	4078.1	1970.9	509.9	340.4	307.2	290.7	283.0	281.7	281.7	281.7
22.5°	4880.0	3883.1	1457.1	386.3	309.8	283.0	261.3	253.7	253.7	255.0	256.2
25°	4827.7	3652.3	1000.7	332.7	286.8	257.5	235.8	228.2	230.7	233.3	234.6
27.5°	4761.4	3377.0	655.3	288.1	256.2	232.0	212.9	207.8	212.9	218.0	220.5
30°	4695.1	3074.8	443.6	249.9	221.8	204.0	192.5	191.2	198.9	210.3	211.6
32.5°	4651.8	2765.1	335.3	224.4	195.0	179.7	174.6	177.2	188.7	201.4	204.0
35°	4648.0	2462.9	285.6	204.0	177.2	163.2	160.6	168.3	181.0	191.2	193.8
37.5°	4707.9	2179.9	258.8	188.7	163.2	149.2	145.3	159.4	170.8	181.0	183.6
40°	4829.0	1926.2	240.9	174.6	151.7	135.1	132.6	144.1	155.5	167.0	170.8
42.5°	4980.7	1689.1	220.5	160.6	139.0	119.8	117.3	126.2	137.7	154.3	156.8
45°	5112.0	1468.6	198.9	145.3	124.9	103.3	102.0	112.2	121.1	136.4	139.0
47.5°	5222.9	1285.0	178.5	128.8	107.1	91.8	90.5	95.6	100.7	114.7	117.3
50°	5164.3	1129.5	158.1	105.8	86.7	79.0	77.8	77.8	84.1	98.2	100.7
52.5°	5020.2	1032.6	139.0	88.0	71.4	67.6	63.7	65.0	71.4	77.8	79.0
55°	4904.2	986.7	122.4	77.8	59.9	56.1	52.3	51.0	52.3	49.7	47.2
56°	4876.2	981.6	118.6	75.2	57.4	52.3	47.2	44.6	43.3	38.2	37.0
57.5°	4863.4	981.6	112.2	70.1	53.5	47.2	40.8	35.7	30.6	26.8	26.8
60°	4853.2	988.0	104.5	61.2	45.9	38.2	29.3	21.7	17.8	17.8	17.8
62.5°	4831.5	985.4	95.6	51.0	39.5	29.3	17.8	14.0	12.7	14.0	15.3
65°	4588.0	915.3	84.1	40.8	30.6	20.4	10.2	10.2	11.5	14.0	15.3
67.5°	3697.0	693.5	68.8	31.9	21.7	15.3	8.9	8.9	11.5	14.0	15.3
70°	2030.8	365.9	58.6	22.9	16.6	12.7	8.9	7.6	11.5	14.0	15.3
72.5°	495.9	153.0	53.5	17.8	15.3	11.5	7.6	7.6	11.5	14.0	15.3
75°	122.4	114.7	43.3	14.0	12.7	10.2	7.6	7.6	11.5	14.0	15.3
77.5°	57.4	151.7	29.3	12.7	11.5	8.9	7.6	7.6	11.5	14.0	14.0
80°	34.4	114.7	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	16.6	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)