

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: P195040

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195040
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-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5700K, 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: 20477 lumens
Efficiency: N/A
Efficacy: 91.0 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): 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

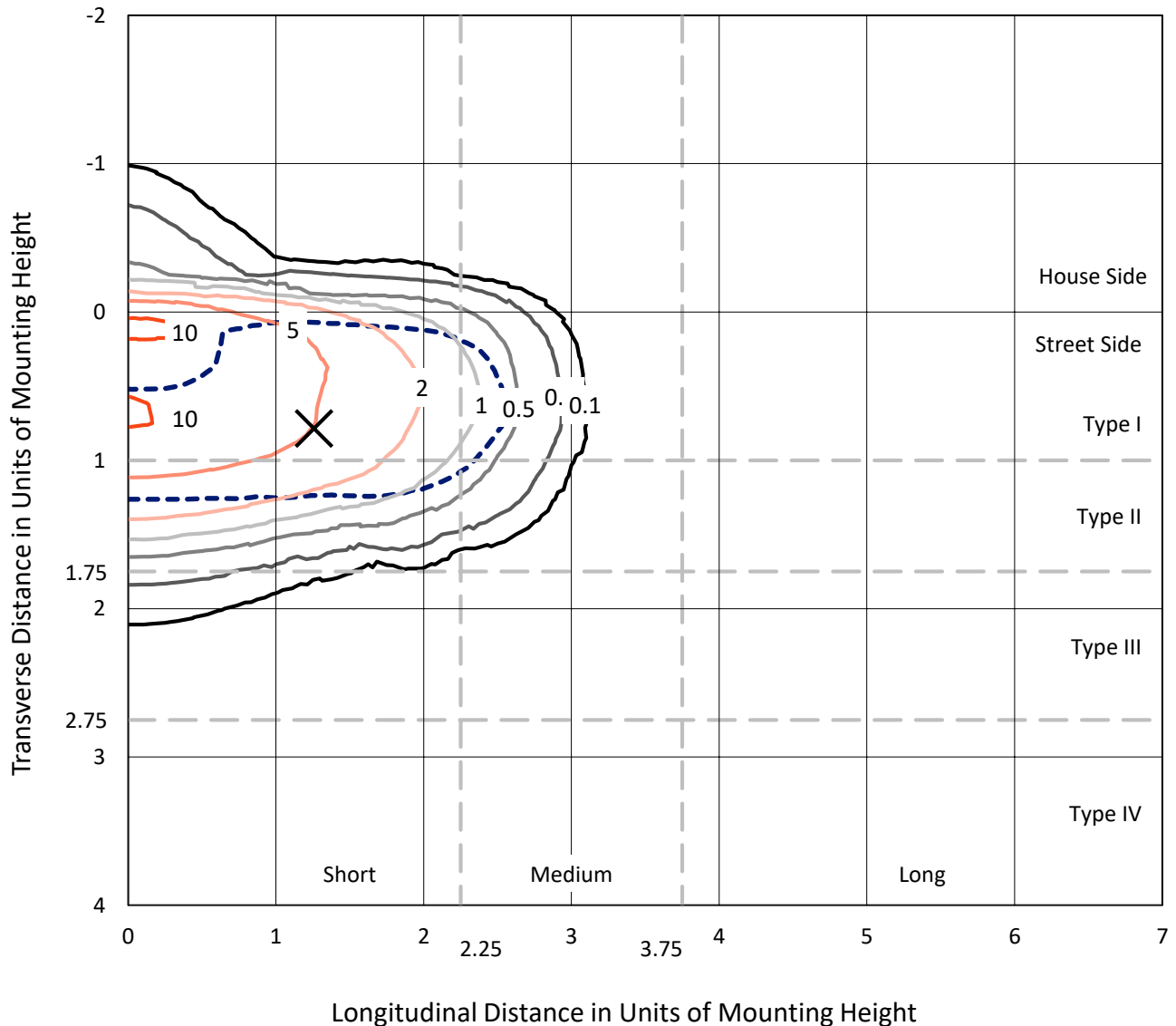


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

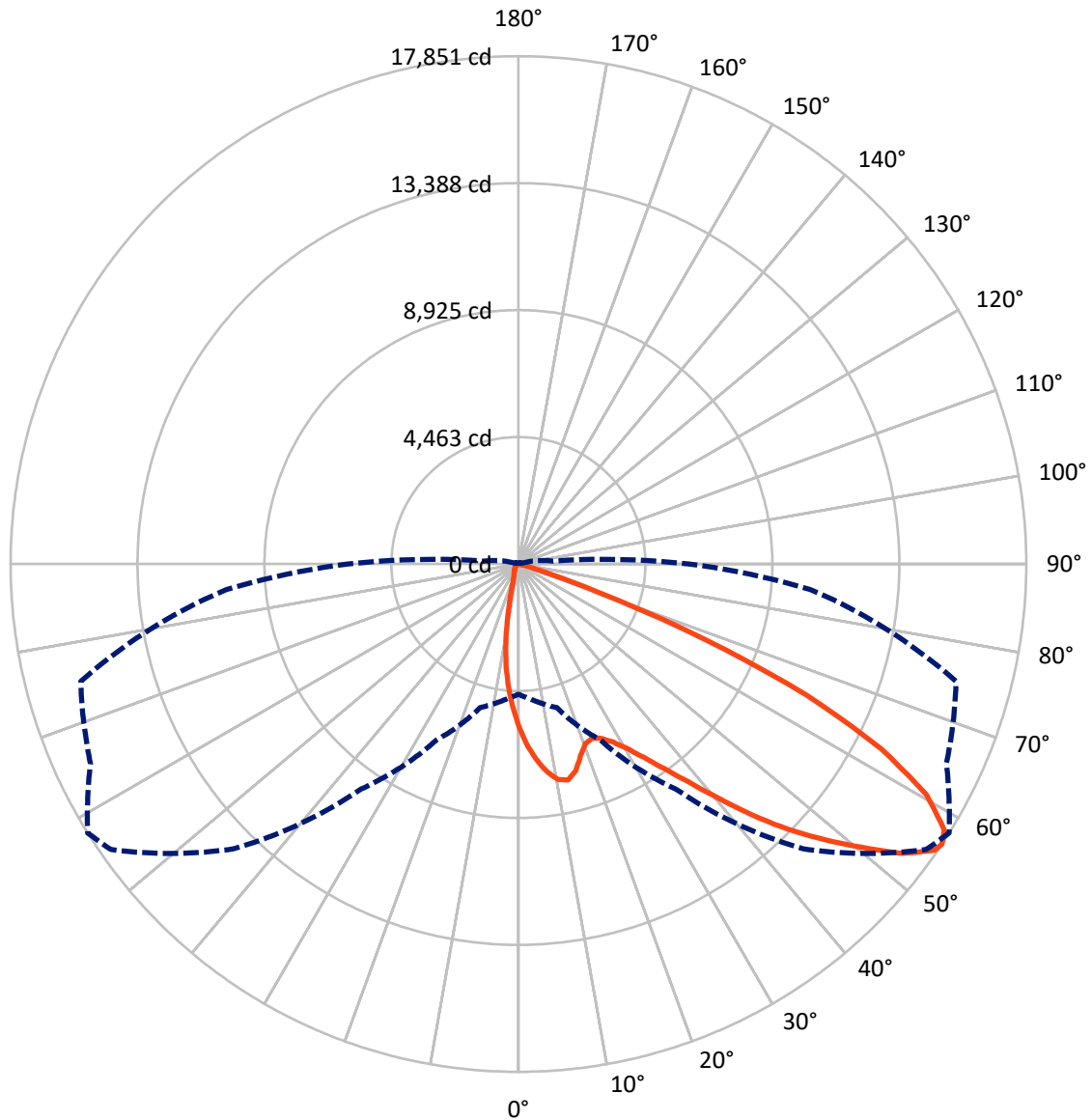


Based on 25 foot mounting height. Maximum calculated value = 11.5 fc
 Type II - Short - Full Cutoff

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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	1278.2	0.0	1278.2
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	19198.8	0.0	19198.8
	% Fixture	93.8	0.0	93.8
Total	Lumens	20477.0	0.0	20477.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	494.6	2.4
10°-20°	1150.8	5.6
20°-30°	1936.4	9.5
30°-40°	3315.9	16.2
40°-50°	5003.8	24.4
50°-60°	5201.3	25.4
60°-70°	2919.9	14.3
70°-80°	400.2	2.0
80°-90°	54.2	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°	20477.0	100.0
0°-180°	20477.0	100.0



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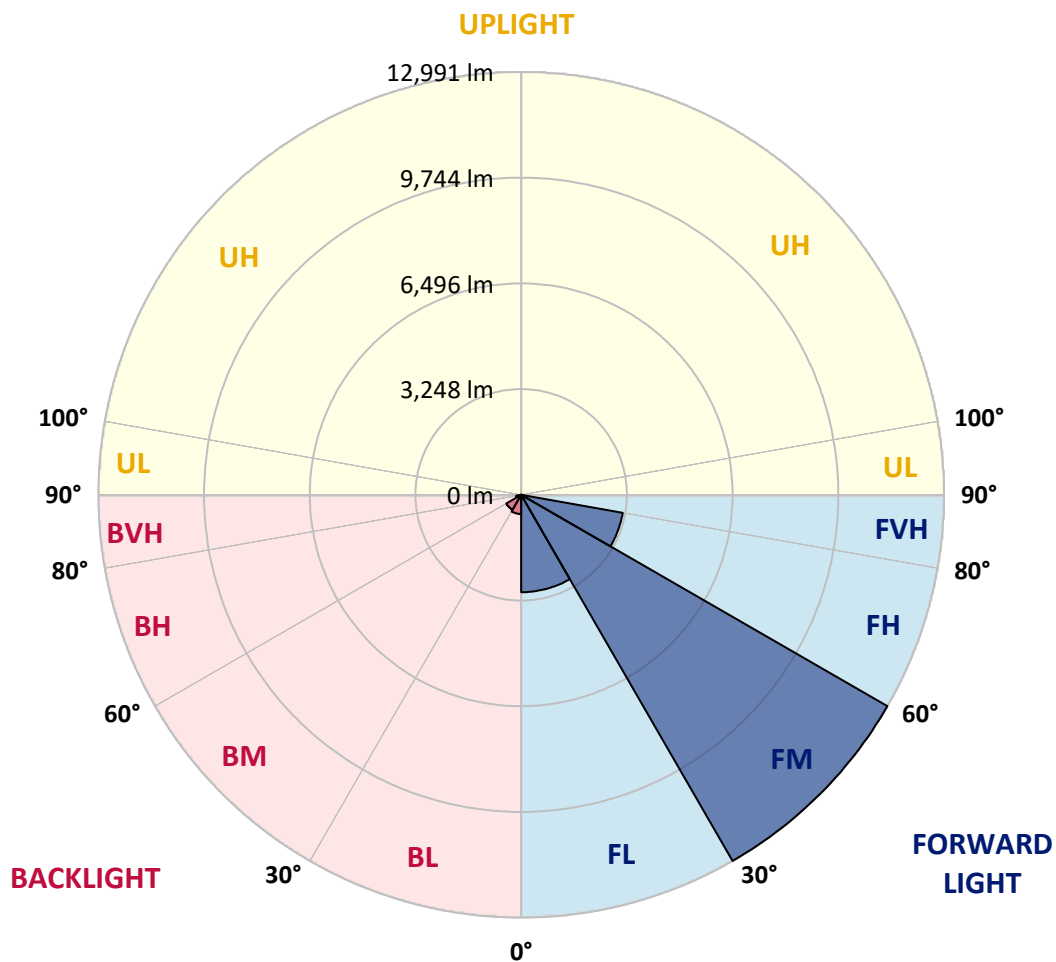
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2992.2	14.6			
FM	(30°-60°)	12991.5	63.4			
FH	(60°-80°)	3168.5	15.5			G2/5000
FVH	(80°-90°)	46.7	0.2			G1/100
BL	(0°-30°)	589.6	2.9	B2/1000		
BM	(30°-60°)	529.5	2.6	B1/1000		
BH	(60°-80°)	151.6	0.7	B1/500		G1/500
BVH	(80°-90°)	7.5	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°	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7
2.5°	6975.6	6933.4	6889.7	6808.5	6733.5	6617.9	6458.5	6419.4	6294.5	6088.2	5896.1
5°	7577.1	7569.3	7539.6	7474.0	7392.8	7252.2	7072.5	6952.2	6758.5	6433.5	6063.2
7.5°	7220.9	7286.5	7394.3	7547.4	7650.5	7636.5	7499.0	7394.3	7202.2	6758.5	6227.3
10°	6086.7	6099.2	6247.6	6569.4	7078.7	7553.7	7733.3	7705.2	7528.7	7042.8	6371.0
12.5°	5686.7	5694.5	5728.9	5832.0	6163.2	6825.6	7639.6	7786.5	7772.4	7314.6	6524.1
15°	5718.0	5722.7	5732.0	5764.8	5858.6	6191.4	7164.7	7538.0	7928.6	7572.4	6674.1
17.5°	5964.8	5961.7	5932.0	5900.8	5930.5	6039.8	6680.4	7074.0	7895.8	7789.6	6797.5
20°	6446.0	6461.6	6361.6	6222.6	6150.7	6155.4	6441.3	6736.6	7711.5	7958.3	6889.7
22.5°	7122.5	7133.4	6969.4	6728.8	6517.9	6411.6	6491.3	6647.5	7499.0	8114.5	6964.7
25°	7930.2	7930.2	7700.5	7358.4	7031.9	6799.1	6730.3	6789.7	7417.8	8291.1	7039.7
27.5°	8801.9	8833.2	8533.2	8084.9	7653.7	7313.1	7097.5	7086.5	7480.2	8512.9	7124.0
30°	9750.3	9778.4	9422.2	8873.8	8362.9	7927.1	7595.9	7524.0	7719.3	8811.3	7247.5
32.5°	10693.9	10717.3	10323.6	9764.3	9169.1	8656.6	8220.8	8106.7	8148.9	9247.2	7428.7
35°	11893.7	11898.4	11400.0	10734.5	10098.6	9497.2	8945.7	8833.2	8786.3	9797.1	7689.6
37.5°	12848.3	12810.8	12495.2	11865.6	11136.0	10508.0	9859.6	9712.8	9600.3	10570.5	8094.2
40°	13073.2	13073.2	13026.4	12837.3	12257.7	11653.1	11025.1	10806.4	10558.0	11481.3	8637.9
42.5°	12487.4	12524.9	12834.2	13245.1	13249.8	12862.3	12248.4	12064.0	11626.6	12518.6	9231.6
45°	11176.6	11187.6	11929.6	13038.9	13791.9	14013.7	13560.7	13306.0	12699.9	13596.6	9775.2
47.5°	10704.8	10739.2	11054.8	12410.8	13832.5	14946.4	14819.9	14469.9	13693.5	14580.9	10283.0
50°	9979.9	10022.1	10408.0	11486.0	13466.9	15544.8	16024.4	15649.5	14598.0	15401.1	10534.5
52.5°	8245.8	8311.4	8856.6	10262.7	12553.0	15569.8	17127.4	16902.4	15524.5	15840.1	10504.8
55°	5674.2	5722.7	6358.5	8011.4	10709.5	14805.8	17602.3	17757.0	16350.9	15938.5	10361.1
56°	4577.5	4758.7	5224.3	6825.6	9659.6	14155.9	17493.0	17850.7	16596.2	15922.9	10298.6
57.5°	3026.2	3060.5	3568.3	4946.2	7756.8	12745.2	16999.3	17650.8	16911.8	15843.2	10253.3
60°	1423.2	1438.9	1621.7	2282.5	4197.9	9287.8	15394.8	16475.9	17027.4	15676.0	10251.7
62.5°	928.0	931.1	953.0	1088.9	1717.0	5058.7	12762.3	14318.4	16069.7	15657.3	10222.1
65°	764.0	771.8	745.2	762.4	898.3	1907.6	9001.9	11162.6	13821.6	15216.7	9887.7
67.5°	673.3	674.9	639.0	618.7	657.7	837.4	4535.3	7041.2	10337.7	12929.5	8144.2
70°	614.0	612.4	571.8	524.9	526.5	556.2	1477.9	2924.6	5719.5	7677.1	4675.9
72.5°	545.2	548.4	524.9	459.3	437.4	393.7	556.2	789.0	1946.6	2465.3	1232.6
75°	478.1	471.8	448.4	406.2	365.6	264.0	279.6	335.9	507.7	503.1	265.6
77.5°	362.5	356.2	367.1	346.8	285.9	184.4	153.1	175.0	229.7	214.0	107.8
80°	276.5	273.4	250.0	296.8	260.9	139.0	104.7	107.8	125.0	114.0	53.1
82.5°	200.0	198.4	189.0	182.8	165.6	101.5	79.7	84.4	93.7	79.7	39.1
85°	76.6	76.6	148.4	125.0	114.0	68.7	56.2	60.9	71.9	57.8	26.6
87.5°	12.5	12.5	100.0	82.8	51.6	34.4	35.9	39.1	42.2	34.4	20.3
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°	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7	5797.7
2.5°	5782.0	5677.4	5447.7	5225.9	5032.1	4819.7	4711.9	4586.9	4540.0	4446.3	4455.7
5°	5841.4	5622.7	5161.8	4675.9	4230.7	3777.6	3455.8	3152.7	2984.0	2816.8	2816.8
7.5°	5902.3	5568.0	4855.6	4079.1	3329.2	2552.8	2002.9	1562.3	1317.0	1153.0	1148.3
10°	5944.5	5497.7	4507.2	3387.0	2280.9	1315.4	793.6	624.9	564.0	537.4	535.9
12.5°	5999.2	5427.4	4110.4	2571.5	1267.0	624.9	495.2	468.7	457.8	451.5	451.5
15°	6046.1	5327.4	3629.2	1729.5	665.5	468.7	426.5	417.1	415.6	414.0	415.6
17.5°	6057.0	5185.2	3052.7	1012.4	482.7	409.3	390.6	382.8	382.8	381.2	381.2
20°	6032.0	4997.8	2415.3	624.9	417.1	376.5	356.2	346.8	345.3	345.3	345.3
22.5°	5980.4	4758.7	1785.7	473.4	379.6	346.8	320.3	310.9	310.9	312.5	314.0
25°	5916.4	4476.0	1226.4	407.8	351.5	315.6	289.0	279.6	282.8	285.9	287.5
27.5°	5835.2	4138.5	803.0	353.1	314.0	284.3	260.9	254.7	260.9	267.2	270.3
30°	5753.9	3768.2	543.7	306.2	271.8	250.0	235.9	234.3	243.7	257.8	259.3
32.5°	5700.8	3388.6	410.9	275.0	239.0	220.3	214.0	217.2	231.2	246.8	250.0
35°	5696.1	3018.3	350.0	250.0	217.2	200.0	196.8	206.2	221.8	234.3	237.5
37.5°	5769.5	2671.5	317.1	231.2	200.0	182.8	178.1	195.3	209.3	221.8	225.0
40°	5918.0	2360.6	295.3	214.0	185.9	165.6	162.5	176.5	190.6	204.7	209.3
42.5°	6103.9	2070.0	270.3	196.8	170.3	146.9	143.7	154.7	168.7	189.0	192.2
45°	6264.8	1799.8	243.7	178.1	153.1	126.5	125.0	137.5	148.4	167.2	170.3
47.5°	6400.7	1574.8	218.7	157.8	131.2	112.5	110.9	117.2	123.4	140.6	143.7
50°	6328.8	1384.2	193.7	129.7	106.2	96.9	95.3	95.3	103.1	120.3	123.4
52.5°	6152.3	1265.5	170.3	107.8	87.5	82.8	78.1	79.7	87.5	95.3	96.9
55°	6010.1	1209.2	150.0	95.3	73.4	68.7	64.1	62.5	64.1	60.9	57.8
56°	5975.8	1203.0	145.3	92.2	70.3	64.1	57.8	54.7	53.1	46.9	45.3
57.5°	5960.1	1203.0	137.5	85.9	65.6	57.8	50.0	43.7	37.5	32.8	32.8
60°	5947.6	1210.8	128.1	75.0	56.2	46.9	35.9	26.6	21.9	21.9	21.9
62.5°	5921.1	1207.7	117.2	62.5	48.4	35.9	21.9	17.2	15.6	17.2	18.7
65°	5622.7	1121.7	103.1	50.0	37.5	25.0	12.5	12.5	14.1	17.2	18.7
67.5°	4530.6	849.9	84.4	39.1	26.6	18.7	10.9	10.9	14.1	17.2	18.7
70°	2488.7	448.4	71.9	28.1	20.3	15.6	10.9	9.4	14.1	17.2	18.7
72.5°	607.7	187.5	65.6	21.9	18.7	14.1	9.4	9.4	14.1	17.2	18.7
75°	150.0	140.6	53.1	17.2	15.6	12.5	9.4	9.4	14.1	17.2	18.7
77.5°	70.3	185.9	35.9	15.6	14.1	10.9	9.4	9.4	14.1	17.2	17.2
80°	42.2	140.6	21.9	14.1	12.5	10.9	9.4	9.4	14.1	17.2	18.7
82.5°	25.0	40.6	15.6	14.1	12.5	9.4	9.4	9.4	14.1	17.2	18.7
85°	21.9	20.3	15.6	14.1	12.5	10.9	9.4	9.4	15.6	18.7	18.7
87.5°	17.2	15.6	14.1	12.5	12.5	10.9	9.4	9.4	14.1	17.2	18.7
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)