

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: P270499

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270499
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-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 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: 19516.8 lumens
Efficiency: N/A
Efficacy: 75.6 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

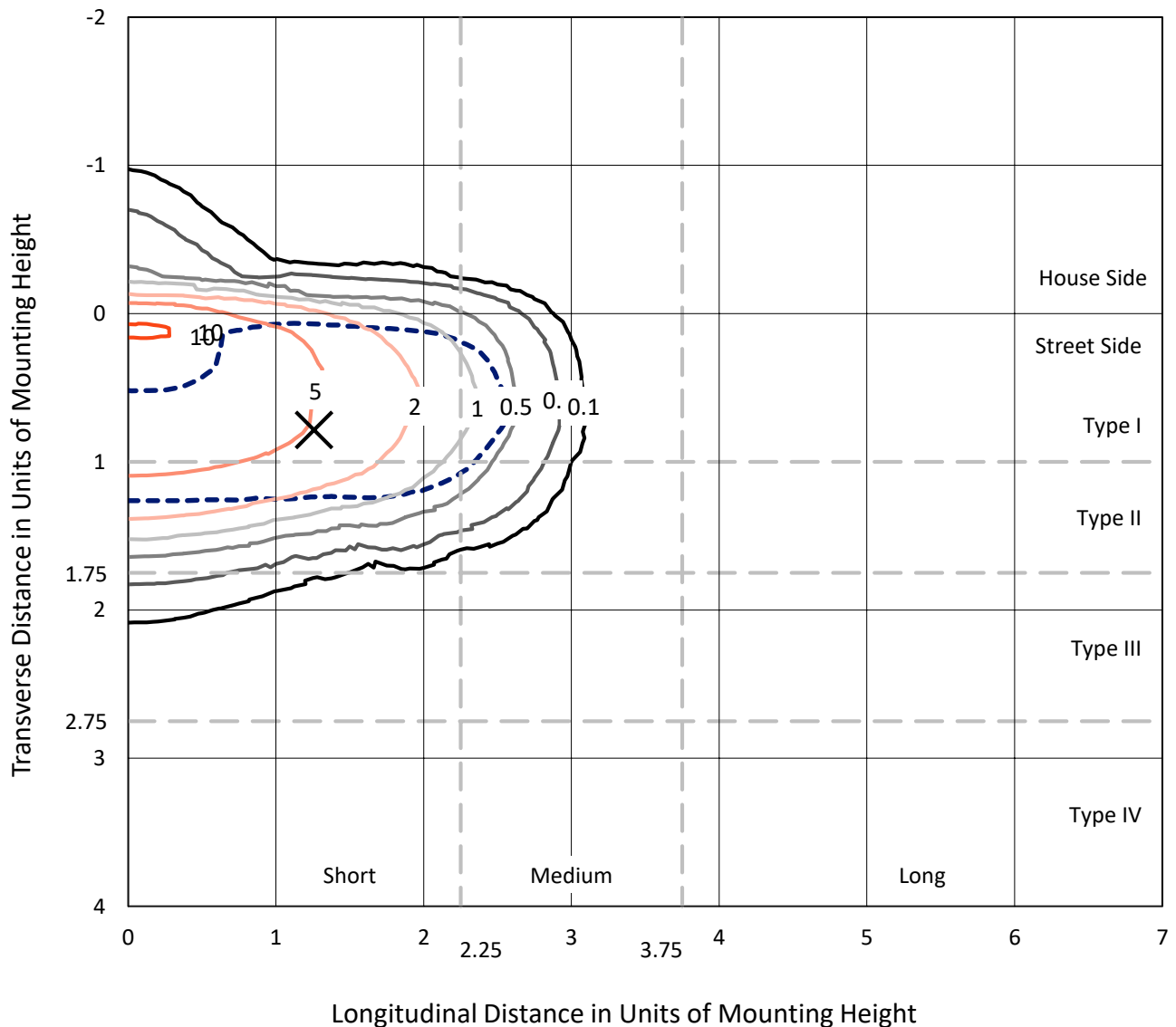


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

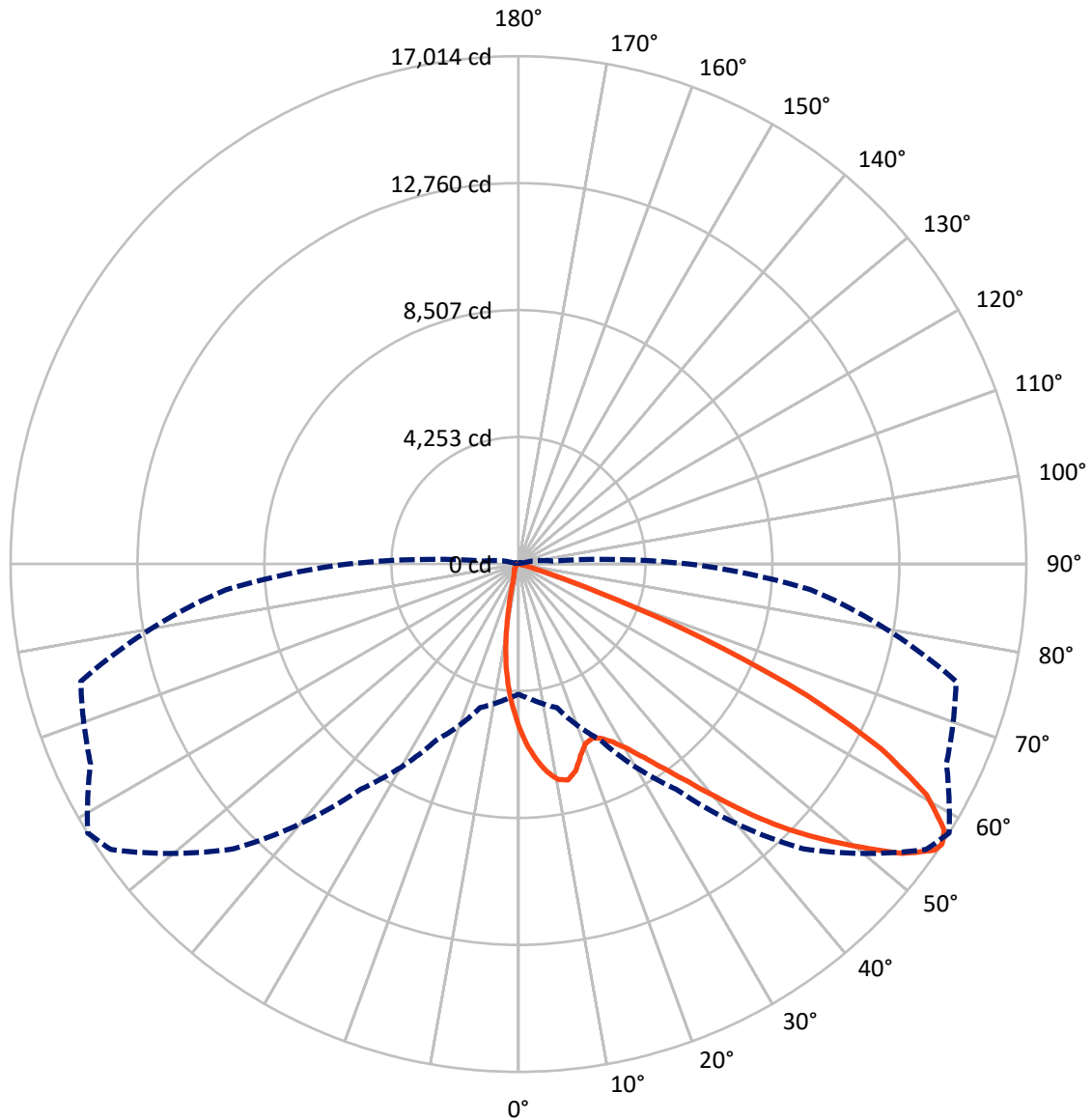


Based on 25 foot mounting height. Maximum calculated value = 11 fc
 Type II - Short - Full Cutoff

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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	1218.3	0.0	1218.3
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	18298.5	0.0	18298.5
	% Fixture	93.8	0.0	93.8
Total	Lumens	19516.8	0.0	19516.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	471.4	2.4
10°-20°	1096.8	5.6
20°-30°	1845.6	9.5
30°-40°	3160.4	16.2
40°-50°	4769.1	24.4
50°-60°	4957.4	25.4
60°-70°	2783.0	14.3
70°-80°	381.4	2.0
80°-90°	51.7	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°	19516.8	100.0
0°-180°	19516.8	100.0

Coefficient of Utilization



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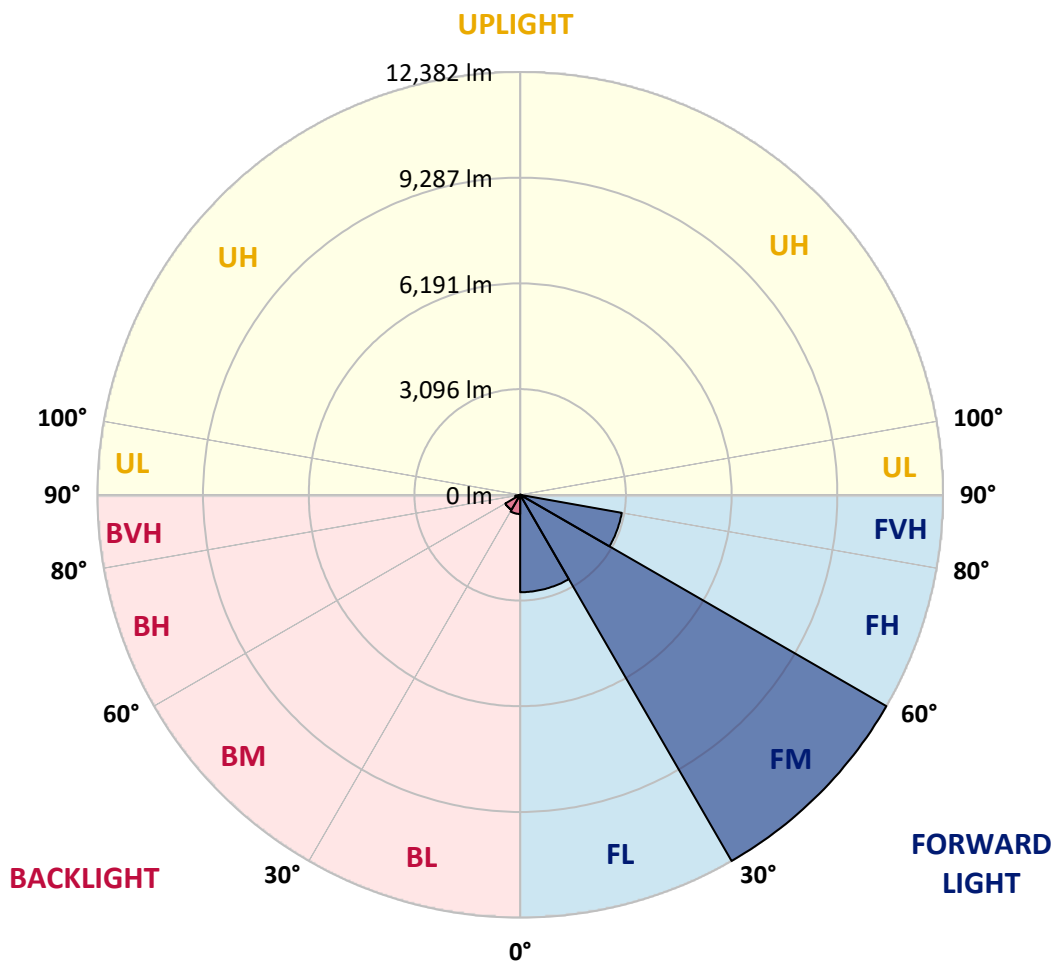
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2851.8	14.6			
FM	(30°-60°)	12382.3	63.4			
FH	(60°-80°)	3019.9	15.5			G2/5000
FVH	(80°-90°)	44.5	0.2			G1/100
BL	(0°-30°)	562.0	2.9	B2/1000		
BM	(30°-60°)	504.6	2.6	B1/1000		
BH	(60°-80°)	144.5	0.7	B1/500		G1/500
BVH	(80°-90°)	7.1	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7
2.5°	6648.5	6608.3	6566.6	6489.1	6417.8	6307.4	6155.6	6118.4	5999.3	5802.7	5619.5
5°	7221.7	7214.4	7186.0	7123.5	7046.0	6912.1	6740.8	6626.2	6441.6	6131.8	5778.9
7.5°	6882.3	6944.8	7047.6	7193.4	7291.8	7278.3	7147.4	7047.6	6864.4	6441.6	5935.3
10°	5801.3	5813.1	5954.7	6261.4	6746.8	7199.5	7370.8	7344.0	7175.7	6712.6	6072.3
12.5°	5420.1	5427.5	5460.3	5558.5	5874.2	6505.5	7281.3	7421.3	7408.0	6971.7	6218.2
15°	5449.8	5454.2	5463.2	5494.6	5583.9	5901.1	6828.6	7184.6	7556.8	7217.3	6361.2
17.5°	5685.2	5682.0	5653.8	5624.1	5652.3	5756.6	6367.0	6742.3	7525.6	7424.3	6478.8
20°	6143.8	6158.6	6063.3	5930.8	5862.2	5866.8	6139.2	6420.6	7349.8	7585.1	6566.6
22.5°	6788.5	6798.9	6642.5	6413.3	6212.1	6111.0	6186.8	6335.8	7147.4	7734.0	6638.0
25°	7558.2	7558.2	7339.4	7013.3	6702.2	6480.3	6414.7	6471.3	7069.9	7902.3	6709.6
27.5°	8389.2	8418.9	8133.1	7705.8	7294.7	6970.2	6764.6	6754.3	7129.5	8113.8	6790.0
30°	9293.1	9319.8	8980.4	8457.7	7970.8	7555.4	7239.7	7171.2	7357.3	8398.2	6907.5
32.5°	10192.3	10214.7	9839.6	9306.4	8739.2	8250.8	7835.2	7726.6	7766.7	8813.6	7080.4
35°	11336.0	11340.5	10865.4	10231.2	9625.1	9051.9	8526.2	8418.9	8374.3	9337.7	7329.0
37.5°	12245.8	12210.0	11909.3	11309.2	10613.8	10015.3	9397.3	9257.4	9150.0	10074.9	7714.6
40°	12460.2	12460.2	12415.6	12235.4	11682.9	11106.6	10508.1	10299.5	10062.9	10942.9	8232.8
42.5°	11901.9	11937.5	12232.4	12624.1	12628.5	12259.2	11674.0	11498.2	11081.3	11931.6	8798.7
45°	10652.6	10662.9	11370.2	12427.4	13145.2	13356.5	12924.8	12682.0	12104.3	12958.9	9316.9
47.5°	10202.8	10235.6	10536.4	11828.8	13183.9	14245.5	14124.9	13791.4	13051.4	13897.0	9800.8
50°	9512.0	9552.0	9920.0	10947.4	12835.4	14815.8	15273.0	14915.5	13913.5	14678.8	10040.5
52.5°	7859.1	7921.7	8441.4	9781.5	11964.3	14839.7	16324.2	16109.8	14796.5	15097.3	10012.1
55°	5408.2	5454.2	6060.3	7635.8	10207.4	14111.6	16776.8	16924.2	15584.2	15191.1	9875.2
56°	4362.9	4535.6	4979.3	6505.5	9206.6	13492.2	16672.6	17013.7	15818.0	15176.1	9815.7
57.5°	2884.3	2916.9	3401.0	4714.2	7393.1	12147.5	16202.1	16823.1	16118.7	15100.1	9772.5
60°	1356.5	1371.4	1545.7	2175.4	4001.1	8852.3	14672.8	15703.4	16228.9	14940.9	9771.0
62.5°	884.6	887.4	908.2	1037.8	1636.4	4821.5	12163.9	13647.0	15316.1	14923.1	9742.7
65°	728.2	735.6	710.3	726.6	856.2	1818.1	8579.8	10639.0	13173.5	14503.1	9424.1
67.5°	641.7	643.2	609.1	589.6	626.8	798.1	4322.6	6711.1	9852.9	12323.2	7762.3
70°	585.2	583.7	545.0	500.4	501.9	530.1	1408.6	2787.5	5451.4	7317.1	4456.8
72.5°	519.7	522.6	500.4	437.7	417.0	375.2	530.1	751.9	1855.3	2349.6	1174.9
75°	455.6	449.7	427.4	387.2	348.5	251.6	266.5	320.2	483.9	479.4	253.1
77.5°	345.5	339.5	349.9	330.5	272.5	175.7	146.0	166.7	218.8	203.9	102.8
80°	263.6	260.6	238.2	283.0	248.7	132.5	99.7	102.8	119.1	108.8	50.7
82.5°	190.6	189.2	180.2	174.2	157.8	96.7	75.9	80.4	89.3	75.9	37.2
85°	72.9	72.9	141.5	119.1	108.8	65.5	53.5	58.1	68.5	55.1	25.3
87.5°	11.9	11.9	95.3	79.0	49.1	32.8	34.2	37.2	40.2	32.8	19.4
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°	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7	5525.7
2.5°	5510.9	5411.1	5192.3	4980.8	4796.2	4593.7	4490.8	4371.8	4327.1	4237.8	4246.6
5°	5567.4	5359.0	4919.7	4456.8	4032.3	3600.4	3293.7	3004.9	2844.0	2684.8	2684.8
7.5°	5625.5	5306.8	4627.9	3887.9	3173.2	2433.1	1909.0	1489.0	1255.2	1098.8	1094.5
10°	5665.8	5240.0	4295.9	3228.1	2174.0	1253.8	756.5	595.5	537.5	512.3	510.7
12.5°	5717.9	5172.9	3917.7	2450.9	1207.6	595.5	472.0	446.6	436.2	430.3	430.3
15°	5762.5	5077.6	3459.1	1648.4	634.4	446.6	406.6	397.6	396.2	394.5	396.2
17.5°	5773.0	4942.0	2909.6	964.9	460.1	390.1	372.3	364.8	364.8	363.4	363.4
20°	5749.2	4763.4	2302.0	595.5	397.6	358.9	339.5	330.5	329.0	329.0	329.0
22.5°	5699.9	4535.6	1702.0	451.2	361.8	330.5	305.2	296.4	296.4	297.8	299.2
25°	5638.9	4266.1	1168.9	388.6	335.1	300.8	275.5	266.5	269.5	272.5	274.1
27.5°	5561.5	3944.5	765.4	336.5	299.2	271.0	248.7	242.7	248.7	254.6	257.6
30°	5484.2	3591.6	518.2	291.9	259.2	238.2	224.8	223.4	232.3	245.6	247.2
32.5°	5433.5	3229.6	391.7	262.0	227.8	209.9	203.9	207.0	220.4	235.3	238.2
35°	5428.9	2876.8	333.5	238.2	207.0	190.6	187.7	196.5	211.5	223.4	226.4
37.5°	5499.0	2546.2	302.3	220.4	190.6	174.2	169.8	186.0	199.6	211.5	214.4
40°	5640.5	2250.0	281.3	203.9	177.1	157.8	154.9	168.3	181.6	195.0	199.6
42.5°	5817.7	1972.9	257.6	187.7	162.4	140.0	137.0	147.4	160.7	180.2	183.2
45°	5971.0	1715.4	232.3	169.8	146.0	120.6	119.1	131.1	141.5	159.3	162.4
47.5°	6100.6	1501.0	208.4	150.3	125.0	107.2	105.7	111.7	117.7	133.9	137.0
50°	6032.1	1319.3	184.6	123.5	101.2	92.3	90.8	90.8	98.3	114.7	117.7
52.5°	5863.7	1206.2	162.4	102.8	83.5	79.0	74.5	75.9	83.5	90.8	92.3
55°	5728.3	1152.5	142.9	90.8	70.0	65.5	61.1	59.6	61.1	58.1	55.1
56°	5695.6	1146.5	138.5	87.9	67.1	61.1	55.1	52.1	50.7	44.6	43.2
57.5°	5680.6	1146.5	131.1	81.8	62.5	55.1	47.6	41.7	35.8	31.4	31.4
60°	5668.8	1154.1	122.1	71.4	53.5	44.6	34.2	25.3	20.8	20.8	20.8
62.5°	5643.4	1151.0	111.7	59.6	46.2	34.2	20.8	16.3	14.9	16.3	17.8
65°	5359.0	1069.2	98.3	47.6	35.8	23.9	11.9	11.9	13.5	16.3	17.8
67.5°	4318.2	810.0	80.4	37.2	25.3	17.8	10.4	10.4	13.5	16.3	17.8
70°	2372.1	427.4	68.5	26.8	19.4	14.9	10.4	9.0	13.5	16.3	17.8
72.5°	579.2	178.8	62.5	20.8	17.8	13.5	9.0	9.0	13.5	16.3	17.8
75°	142.9	133.9	50.7	16.3	14.9	11.9	9.0	9.0	13.5	16.3	17.8
77.5°	67.1	177.1	34.2	14.9	13.5	10.4	9.0	9.0	13.5	16.3	16.3
80°	40.2	133.9	20.8	13.5	11.9	10.4	9.0	9.0	13.5	16.3	17.8
82.5°	23.9	38.6	14.9	13.5	11.9	9.0	9.0	9.0	13.5	16.3	17.8
85°	20.8	19.4	14.9	13.5	11.9	10.4	9.0	9.0	14.9	17.8	17.8
87.5°	16.3	14.9	13.5	11.9	11.9	10.4	9.0	9.0	13.5	16.3	17.8
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)