

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: P196961

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196961
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-05-D-UNV-AFL-8030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 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: 20595 lumens
Efficiency: N/A
Efficacy: 73.8 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

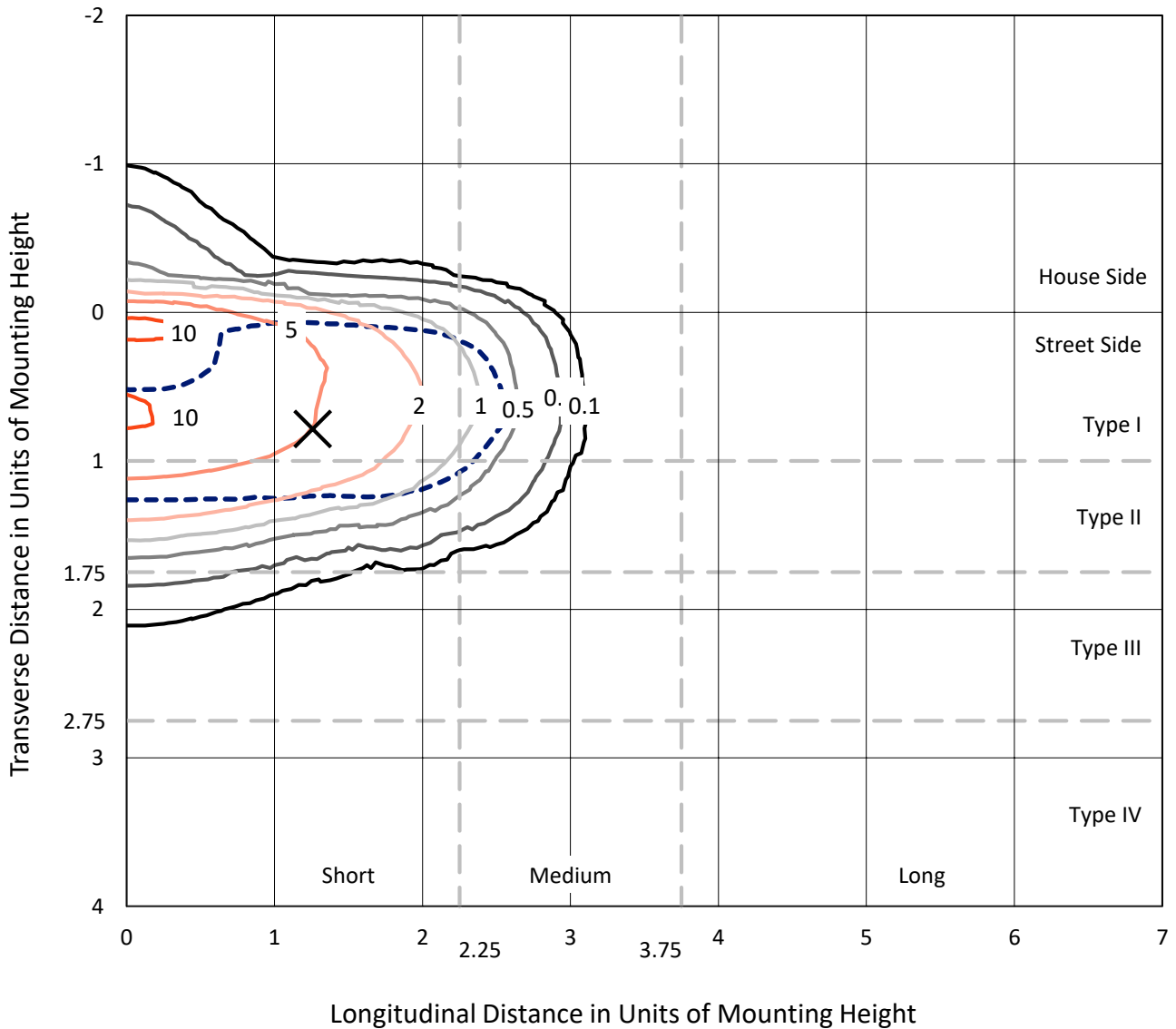
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

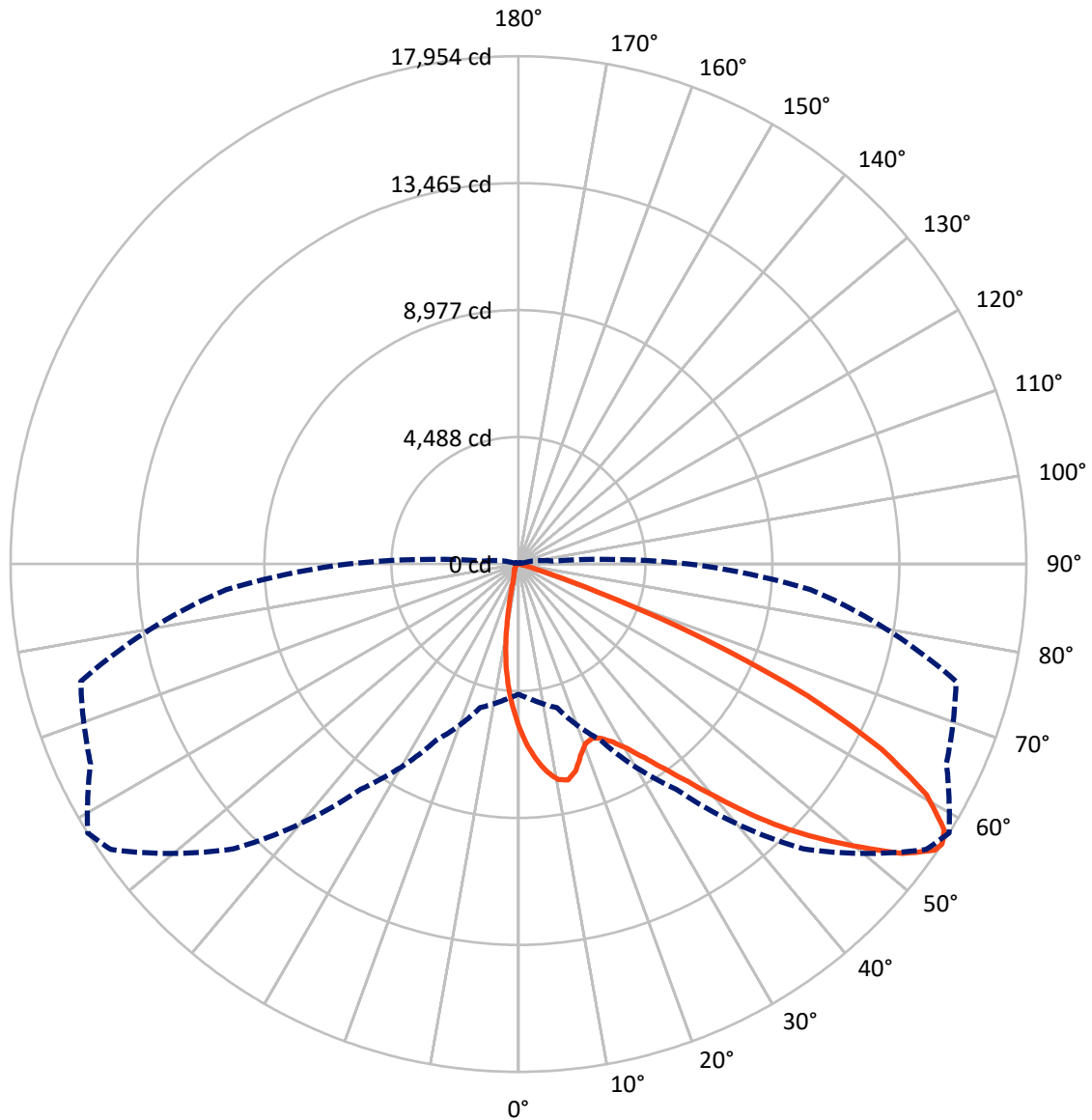


Based on 25 foot mounting height. Maximum calculated value = 11.6 fc
 Type II - Short - Full Cutoff

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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	1285.5	0.0	1285.5
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	19309.5	0.0	19309.5
	% Fixture	93.8	0.0	93.8
Total	Lumens	20595.0	0.0	20595.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	497.4	2.4
10°-20°	1157.4	5.6
20°-30°	1947.6	9.5
30°-40°	3335.0	16.2
40°-50°	5032.6	24.4
50°-60°	5231.2	25.4
60°-70°	2936.7	14.3
70°-80°	402.5	2.0
80°-90°	54.5	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°	20595.0	100.0
0°-180°	20595.0	100.0



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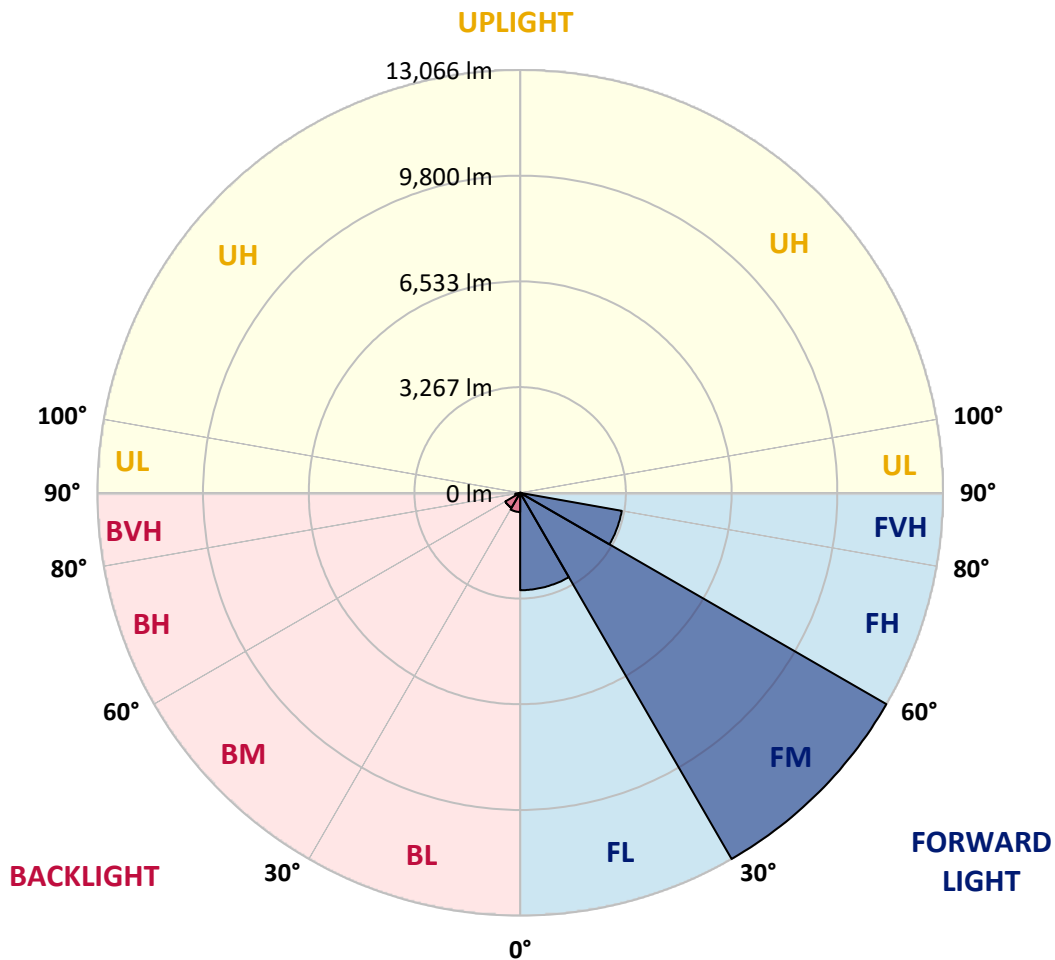
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3009.4	14.6			
FM	(30°-60°)	13066.3	63.4			
FH	(60°-80°)	3186.7	15.5			G2/5000
FVH	(80°-90°)	47.0	0.2			G1/100
BL	(0°-30°)	593.0	2.9	B2/1000		
BM	(30°-60°)	532.5	2.6	B1/1000		
BH	(60°-80°)	152.5	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°	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1
2.5°	7015.8	6973.4	6929.4	6847.7	6772.3	6656.0	6495.7	6456.4	6330.7	6123.3	5930.1
5°	7620.8	7612.9	7583.1	7517.1	7435.4	7293.9	7113.2	6992.3	6797.4	6470.6	6098.2
7.5°	7262.5	7328.5	7436.9	7590.9	7694.6	7680.5	7542.2	7436.9	7243.7	6797.4	6263.2
10°	6121.8	6134.3	6283.6	6607.3	7119.5	7597.2	7777.9	7749.6	7572.1	7083.4	6407.7
12.5°	5719.5	5727.4	5761.9	5865.6	6198.7	6865.0	7683.6	7831.3	7817.2	7356.8	6561.7
15°	5750.9	5755.6	5765.1	5798.1	5892.3	6227.0	7205.9	7581.5	7974.3	7616.1	6712.6
17.5°	5999.2	5996.1	5966.2	5934.8	5964.6	6074.6	6718.8	7114.8	7941.3	7834.5	6836.7
20°	6483.2	6498.9	6398.3	6258.5	6186.2	6190.9	6478.4	6775.4	7755.9	8004.2	6929.4
22.5°	7163.5	7174.5	7009.5	6767.6	6555.4	6448.6	6528.7	6685.9	7542.2	8161.3	7004.8
25°	7975.9	7975.9	7744.9	7400.8	7072.4	6838.3	6769.1	6828.8	7460.5	8338.9	7080.2
27.5°	8852.7	8884.1	8582.4	8131.4	7697.8	7355.2	7138.4	7127.4	7523.3	8562.0	7165.1
30°	9806.4	9834.7	9476.5	8924.9	8411.1	7972.7	7639.6	7567.3	7763.8	8862.1	7289.2
32.5°	10755.5	10779.1	10383.1	9820.6	9221.9	8706.5	8268.1	8153.4	8195.9	9300.5	7471.5
35°	11962.3	11967.0	11465.7	10796.4	10156.8	9551.9	8997.2	8884.1	8837.0	9853.6	7733.9
37.5°	12922.3	12884.6	12567.2	11934.0	11200.2	10568.5	9916.4	9768.7	9655.6	10631.4	8140.9
40°	13148.6	13148.6	13101.4	12911.3	12328.4	11720.3	11088.6	10868.6	10618.8	11547.4	8687.7
42.5°	12559.3	12597.1	12908.2	13321.4	13326.1	12936.5	12318.9	12133.5	11693.6	12590.8	9284.8
45°	11241.0	11252.0	11998.4	13114.0	13871.4	14094.5	13638.8	13382.7	12773.0	13675.0	9831.6
47.5°	10766.5	10801.1	11118.5	12482.3	13912.2	15032.6	14905.3	14553.3	13772.4	14664.9	10342.2
50°	10037.4	10079.8	10468.0	11552.1	13544.5	15634.4	16116.7	15739.6	14682.2	15489.8	10595.2
52.5°	8293.3	8359.3	8907.7	10321.8	12625.3	15659.5	17226.1	16999.8	15613.9	15931.3	10565.4
55°	5706.9	5755.6	6395.2	8057.6	10771.2	14891.1	17703.8	17859.3	16445.2	16030.3	10420.8
56°	4603.9	4786.2	5254.4	6865.0	9715.3	14237.5	17593.8	17953.6	16691.8	16014.6	10358.0
57.5°	3043.6	3078.2	3588.8	4974.7	7801.5	12818.6	17097.2	17752.5	17009.2	15934.5	10312.4
60°	1431.4	1447.2	1631.0	2295.7	4222.1	9341.3	15483.5	16570.9	17125.5	15766.4	10310.8
62.5°	933.3	936.5	958.5	1095.2	1726.9	5087.8	12835.9	14400.9	16162.3	15747.5	10281.0
65°	768.4	776.2	749.5	766.8	903.5	1918.5	9053.8	11226.9	13901.2	15304.4	9944.7
67.5°	677.2	678.8	642.7	622.2	661.5	842.2	4561.5	7081.8	10397.2	13004.0	8191.1
70°	617.5	615.9	575.1	528.0	529.5	559.4	1486.4	2941.5	5752.5	7721.3	4702.9
72.5°	548.4	551.5	528.0	462.0	440.0	396.0	559.4	793.5	1957.8	2479.5	1239.7
75°	480.8	474.5	451.0	408.5	367.7	265.5	281.3	337.8	510.7	506.0	267.1
77.5°	364.5	358.3	369.3	348.8	287.5	185.4	154.0	176.0	231.0	215.3	108.4
80°	278.1	275.0	251.4	298.5	262.4	139.8	105.3	108.4	125.7	114.7	53.4
82.5°	201.1	199.6	190.1	183.8	166.6	102.1	80.1	84.8	94.3	80.1	39.3
85°	77.0	77.0	149.3	125.7	114.7	69.1	56.6	61.3	72.3	58.1	26.7
87.5°	12.6	12.6	100.6	83.3	51.9	34.6	36.1	39.3	42.4	34.6	20.4
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°	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1	5831.1
2.5°	5815.4	5710.1	5479.1	5256.0	5061.1	4847.4	4739.0	4613.3	4566.2	4471.9	4481.3
5°	5875.1	5655.1	5191.6	4702.9	4255.1	3799.4	3475.7	3170.9	3001.2	2833.0	2833.0
7.5°	5936.3	5600.1	4883.6	4102.6	3348.4	2567.5	2014.4	1571.3	1324.6	1159.6	1154.9
10°	5978.8	5529.4	4533.2	3406.6	2294.1	1323.0	798.2	628.5	567.2	540.5	539.0
12.5°	6033.8	5458.7	4134.1	2586.3	1274.3	628.5	498.1	471.4	460.4	454.1	454.1
15°	6080.9	5358.1	3650.1	1739.4	669.4	471.4	429.0	419.5	418.0	416.4	418.0
17.5°	6091.9	5215.1	3070.3	1018.2	485.5	411.7	392.8	385.0	385.0	383.4	383.4
20°	6066.8	5026.6	2429.2	628.5	419.5	378.7	358.3	348.8	347.3	347.3	347.3
22.5°	6014.9	4786.2	1796.0	476.1	381.8	348.8	322.1	312.7	312.7	314.3	315.8
25°	5950.5	4501.8	1233.5	410.1	353.5	317.4	290.7	281.3	284.4	287.5	289.1
27.5°	5868.8	4162.4	807.6	355.1	315.8	286.0	262.4	256.1	262.4	268.7	271.8
30°	5787.1	3790.0	546.8	308.0	273.4	251.4	237.3	235.7	245.1	259.3	260.8
32.5°	5733.6	3408.1	413.2	276.5	240.4	221.6	215.3	218.4	232.6	248.3	251.4
35°	5728.9	3035.7	352.0	251.4	218.4	201.1	198.0	207.4	223.1	235.7	238.8
37.5°	5802.8	2686.9	319.0	232.6	201.1	183.8	179.1	196.4	210.6	223.1	226.3
40°	5952.1	2374.2	297.0	215.3	187.0	166.6	163.4	177.6	191.7	205.8	210.6
42.5°	6139.0	2082.0	271.8	198.0	171.3	147.7	144.6	155.6	169.7	190.1	193.3
45°	6300.9	1810.1	245.1	179.1	154.0	127.3	125.7	138.3	149.3	168.1	171.3
47.5°	6437.6	1583.9	220.0	158.7	132.0	113.1	111.6	117.8	124.1	141.4	144.6
50°	6365.3	1392.2	194.8	130.4	106.8	97.4	95.8	95.8	103.7	121.0	124.1
52.5°	6187.8	1272.7	171.3	108.4	88.0	83.3	78.6	80.1	88.0	95.8	97.4
55°	6044.8	1216.2	150.8	95.8	73.9	69.1	64.4	62.9	64.4	61.3	58.1
56°	6010.2	1209.9	146.1	92.7	70.7	64.4	58.1	55.0	53.4	47.1	45.6
57.5°	5994.5	1209.9	138.3	86.4	66.0	58.1	50.3	44.0	37.7	33.0	33.0
60°	5981.9	1217.8	128.8	75.4	56.6	47.1	36.1	26.7	22.0	22.0	22.0
62.5°	5955.2	1214.6	117.8	62.9	48.7	36.1	22.0	17.3	15.7	17.3	18.9
65°	5655.1	1128.2	103.7	50.3	37.7	25.1	12.6	12.6	14.1	17.3	18.9
67.5°	4556.7	854.8	84.8	39.3	26.7	18.9	11.0	11.0	14.1	17.3	18.9
70°	2503.1	451.0	72.3	28.3	20.4	15.7	11.0	9.4	14.1	17.3	18.9
72.5°	611.2	188.6	66.0	22.0	18.9	14.1	9.4	9.4	14.1	17.3	18.9
75°	150.8	141.4	53.4	17.3	15.7	12.6	9.4	9.4	14.1	17.3	18.9
77.5°	70.7	187.0	36.1	15.7	14.1	11.0	9.4	9.4	14.1	17.3	17.3
80°	42.4	141.4	22.0	14.1	12.6	11.0	9.4	9.4	14.1	17.3	18.9
82.5°	25.1	40.9	15.7	14.1	12.6	9.4	9.4	9.4	14.1	17.3	18.9
85°	22.0	20.4	15.7	14.1	12.6	11.0	9.4	9.4	15.7	18.9	18.9
87.5°	17.3	15.7	14.1	12.6	12.6	11.0	9.4	9.4	14.1	17.3	18.9
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)