

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: P270580

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270580
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-7027-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 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: 21928.3 lumens
Efficiency: N/A
Efficacy: 78.6 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

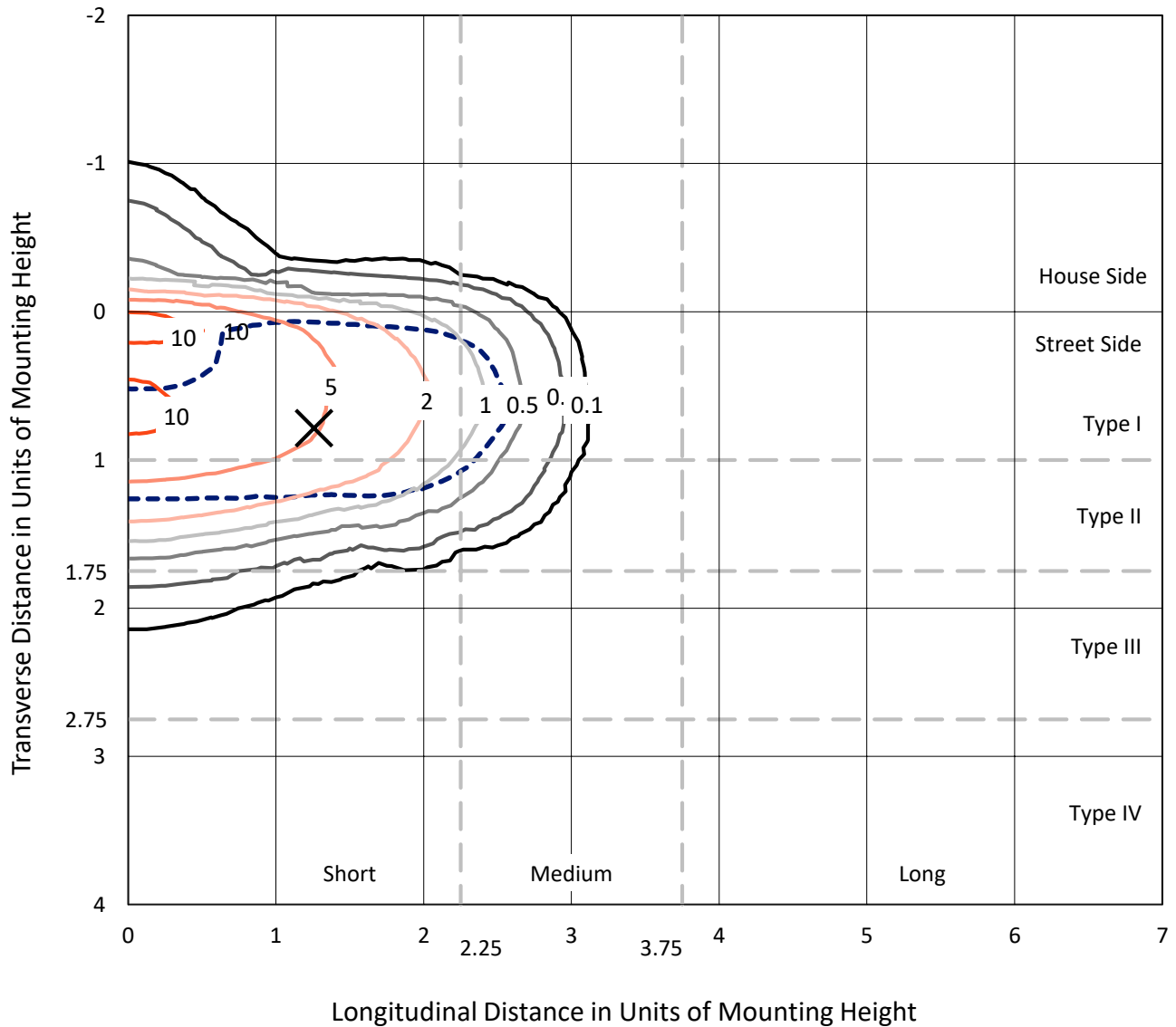


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Iso-Footcandle Lines of Horizontal Illumination

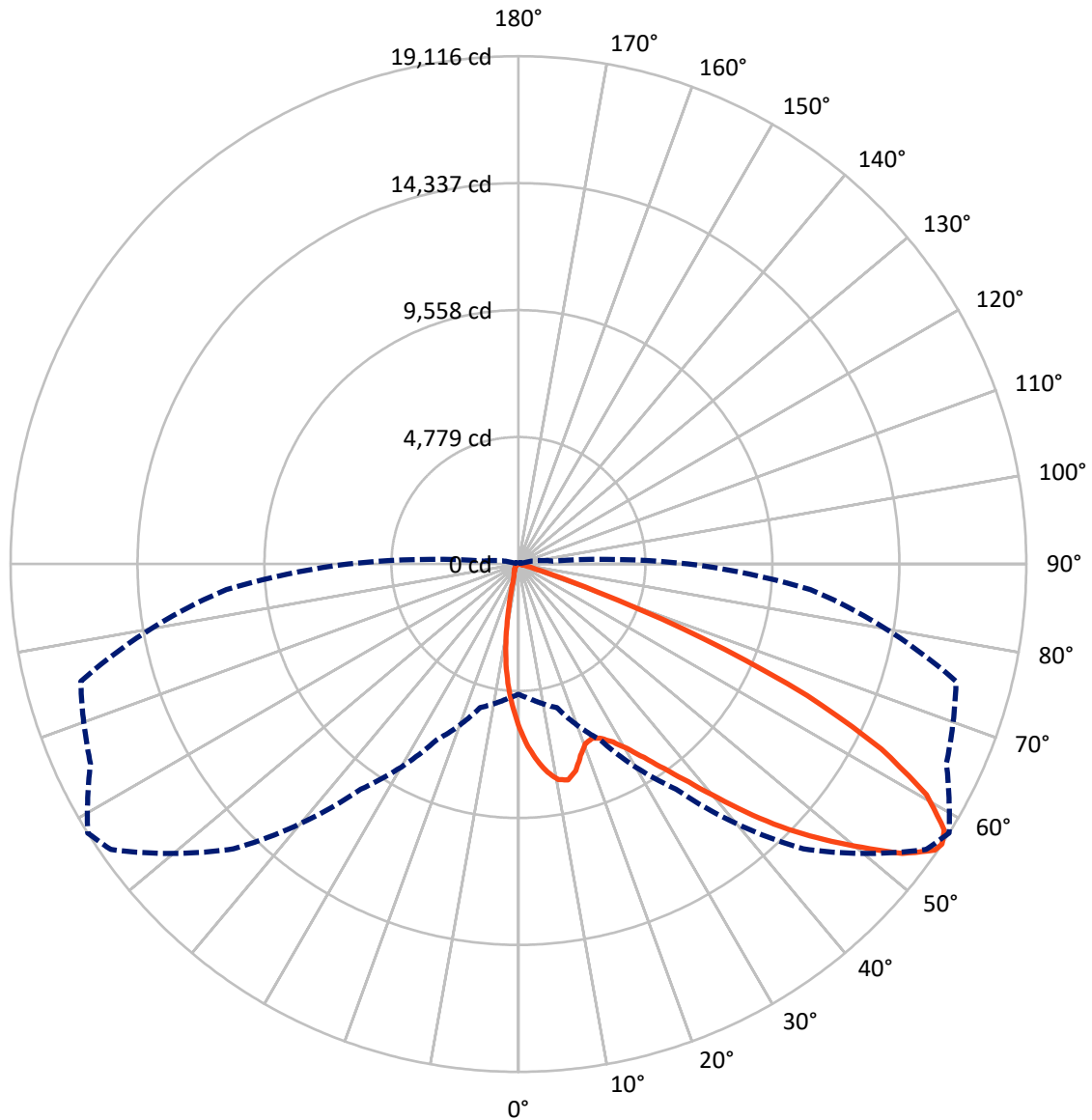
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.3 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	1368.8	0.0	1368.8
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	20559.5	0.0	20559.5
	% Fixture	93.8	0.0	93.8
Total	Lumens	21928.3	0.0	21928.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	529.6	2.4
10°-20°	1232.4	5.6
20°-30°	2073.6	9.5
30°-40°	3550.9	16.2
40°-50°	5358.4	24.4
50°-60°	5569.9	25.4
60°-70°	3126.8	14.3
70°-80°	428.5	2.0
80°-90°	58.1	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°	21928.3	100.0
0°-180°	21928.3	100.0

Coefficient of Utilization



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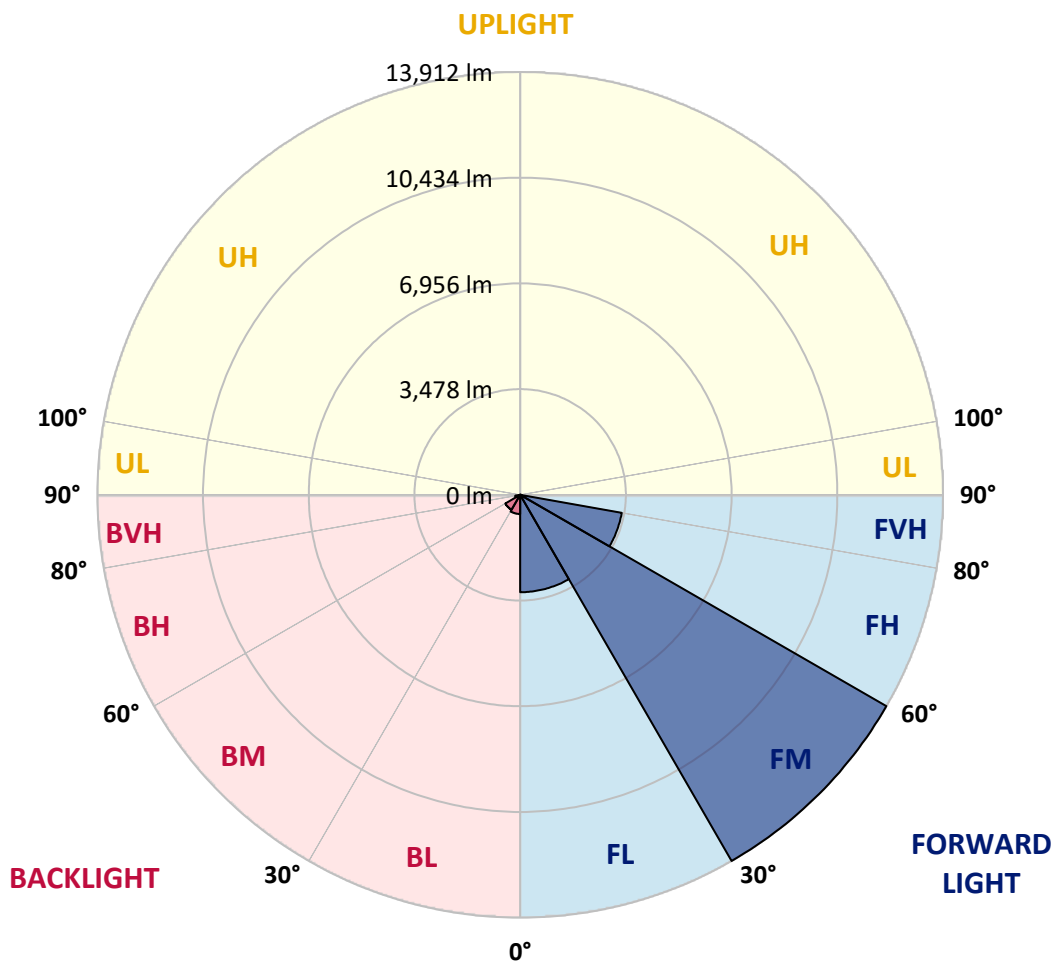
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3204.2	14.6			
FM	(30°-60°)	13912.2	63.4			
FH	(60°-80°)	3393.0	15.5			G2/5000
FVH	(80°-90°)	50.0	0.2			G1/100
BL	(0°-30°)	631.4	2.9	B2/1000		
BM	(30°-60°)	567.0	2.6	B1/1000		
BH	(60°-80°)	162.4	0.7	B1/500		G1/500
BVH	(80°-90°)	8.0	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°	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5
2.5°	7469.9	7424.9	7378.0	7291.1	7210.6	7086.9	6916.2	6874.4	6740.6	6519.7	6313.9
5°	8114.1	8105.8	8074.0	8003.7	7916.8	7766.1	7573.7	7445.0	7237.5	6889.6	6492.9
7.5°	7732.7	7802.9	7918.4	8082.3	8192.7	8177.7	8030.5	7918.4	7712.6	7237.5	6668.7
10°	6518.0	6531.4	6690.3	7035.0	7580.4	8089.0	8281.5	8251.3	8062.3	7541.9	6822.5
12.5°	6089.8	6098.1	6135.0	6245.3	6600.0	7309.4	8181.0	8338.2	8323.2	7833.0	6986.5
15°	6123.2	6128.2	6138.3	6173.4	6273.9	6630.2	7672.5	8072.3	8490.5	8109.1	7147.2
17.5°	6387.6	6384.3	6352.5	6318.9	6350.7	6467.8	7153.8	7575.3	8455.3	8341.7	7279.2
20°	6902.8	6919.6	6812.4	6663.5	6586.6	6591.7	6897.8	7214.0	8257.9	8522.3	7378.0
22.5°	7627.2	7638.9	7463.3	7205.7	6979.8	6866.0	6951.4	7118.7	8030.5	8689.7	7458.3
25°	8492.1	8492.1	8246.4	7879.9	7530.2	7280.9	7207.3	7270.9	7943.4	8878.7	7538.5
27.5°	9425.7	9459.2	9138.0	8657.9	8196.0	7831.3	7600.5	7588.8	8010.4	9116.3	7628.9
30°	10441.3	10471.5	10089.9	9502.7	8955.7	8488.9	8134.2	8057.3	8266.4	9435.7	7761.0
32.5°	11451.8	11476.8	11055.4	10456.4	9819.0	9270.1	8803.4	8681.3	8726.5	9902.6	7955.2
35°	12736.7	12741.6	12208.0	11495.3	10814.3	10170.3	9579.6	9459.2	9409.0	10491.5	8234.6
37.5°	13758.9	13718.7	13380.8	12706.5	11925.2	11252.7	10558.4	10401.1	10280.7	11319.6	8667.8
40°	13999.7	13999.7	13949.6	13747.1	13126.5	12479.1	11806.5	11572.2	11306.2	12295.0	9250.0
42.5°	13372.3	13412.6	13743.8	14183.8	14188.8	13773.9	13116.4	12919.1	12450.6	13405.9	9885.8
45°	11968.7	11980.4	12775.2	13963.0	14769.4	15006.9	14521.8	14249.0	13599.9	14560.3	10468.0
47.5°	11463.5	11500.3	11838.3	13290.5	14813.0	16005.7	15870.1	15495.5	14663.9	15614.2	11011.8
50°	10687.2	10732.4	11145.6	12300.0	14421.4	16646.5	17160.1	16758.6	15632.7	16492.5	11281.2
52.5°	8830.2	8900.4	9484.3	10990.0	13442.6	16673.3	18341.2	18100.3	16624.8	16962.7	11249.4
55°	6076.3	6128.2	6809.2	8579.3	11468.5	15855.2	18849.9	19015.5	17509.8	17068.1	11095.4
56°	4902.0	5096.1	5594.6	7309.4	10344.3	15159.2	18732.7	19115.8	17772.4	17051.4	11028.5
57.5°	3240.6	3277.5	3821.2	5296.8	8306.4	13648.5	18204.1	18901.6	18110.4	16966.0	10980.1
60°	1524.2	1540.9	1736.7	2444.3	4495.4	9946.0	16485.9	17643.6	18234.2	16787.0	10978.4
62.5°	993.7	997.1	1020.6	1166.1	1838.7	5417.1	13666.9	15333.2	17208.7	16767.0	10946.6
65°	818.0	826.5	798.1	816.4	961.9	2042.7	9639.9	11953.7	14801.2	16295.2	10588.5
67.5°	721.1	722.7	684.2	662.5	704.4	896.8	4856.7	7540.3	11070.4	13845.8	8721.5
70°	657.5	655.9	612.4	562.1	563.7	595.5	1582.6	3131.9	6125.0	8221.2	5007.3
72.5°	583.9	587.2	562.1	491.8	468.5	421.7	595.5	844.9	2084.5	2639.9	1320.0
75°	511.9	505.2	480.1	435.0	391.5	282.7	299.4	359.7	543.7	538.8	284.5
77.5°	388.2	381.4	393.2	371.4	306.1	197.4	163.9	187.3	246.0	229.2	115.4
80°	296.1	292.8	267.6	317.9	279.5	148.8	112.1	115.4	133.8	122.1	57.0
82.5°	214.2	212.4	202.5	195.7	177.3	108.8	85.2	90.3	100.4	85.2	41.9
85°	81.9	81.9	158.9	133.8	122.1	73.7	60.2	65.2	77.0	62.0	28.4
87.5°	13.4	13.4	107.1	88.7	55.2	36.8	38.4	41.9	45.2	36.8	21.7
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°	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5	6208.5
2.5°	6191.8	6079.6	5833.9	5596.3	5388.8	5161.2	5045.8	4911.9	4861.7	4761.3	4771.4
5°	6255.3	6021.2	5527.6	5007.3	4530.5	4045.3	3700.7	3376.1	3195.5	3016.5	3016.5
7.5°	6320.7	5962.6	5199.7	4368.3	3565.3	2733.7	2144.9	1673.1	1410.3	1234.7	1229.7
10°	6365.7	5887.3	4826.7	3627.0	2442.6	1408.7	849.8	669.1	604.0	575.5	573.8
12.5°	6424.4	5812.0	4401.6	2753.8	1356.8	669.1	530.4	502.0	490.1	483.5	483.5
15°	6474.5	5705.0	3886.3	1852.0	712.7	502.0	456.8	446.6	445.0	443.4	445.0
17.5°	6486.3	5552.8	3269.0	1084.2	517.0	438.4	418.3	409.8	409.8	408.2	408.2
20°	6459.5	5352.0	2586.5	669.1	446.6	403.2	381.4	371.4	369.7	369.7	369.7
22.5°	6404.2	5096.1	1912.2	507.0	406.6	371.4	343.0	332.9	332.9	334.6	336.2
25°	6335.7	4793.1	1313.3	436.7	376.4	337.9	309.5	299.4	302.8	306.1	307.8
27.5°	6248.7	4431.8	859.9	378.0	336.2	304.4	279.5	272.6	279.5	286.1	289.4
30°	6161.7	4035.2	582.2	327.9	291.1	267.6	252.7	250.9	261.0	276.0	277.8
32.5°	6104.8	3628.8	440.0	294.5	255.9	235.9	229.2	232.5	247.7	264.3	267.6
35°	6099.9	3232.2	374.8	267.6	232.5	214.2	210.8	220.9	237.6	250.9	254.3
37.5°	6178.5	2860.8	339.6	247.7	214.2	195.7	190.7	209.1	224.1	237.6	240.9
40°	6337.4	2527.9	316.3	229.2	199.1	177.3	174.0	189.1	204.2	219.1	224.1
42.5°	6536.4	2216.7	289.4	210.8	182.4	157.3	153.9	165.6	180.6	202.5	205.8
45°	6708.8	1927.4	261.0	190.7	163.9	135.6	133.8	147.2	158.9	179.0	182.4
47.5°	6854.3	1686.4	234.2	169.1	140.6	120.5	118.8	125.5	132.2	150.6	153.9
50°	6777.4	1482.4	207.5	138.9	113.7	103.8	102.0	102.0	110.4	128.8	132.2
52.5°	6588.3	1355.2	182.4	115.4	93.8	88.7	83.6	85.2	93.8	102.0	103.8
55°	6436.0	1294.8	160.5	102.0	78.6	73.7	68.6	67.0	68.6	65.2	62.0
56°	6399.3	1288.2	155.5	98.8	75.3	68.6	62.0	58.6	57.0	50.1	48.5
57.5°	6382.5	1288.2	147.2	92.0	70.2	62.0	53.4	46.8	40.2	35.2	35.2
60°	6369.2	1296.6	137.3	80.3	60.2	50.1	38.4	28.4	23.4	23.4	23.4
62.5°	6340.7	1293.2	125.5	67.0	51.8	38.4	23.4	18.4	16.7	18.4	20.1
65°	6021.2	1201.3	110.4	53.4	40.2	26.8	13.4	13.4	15.0	18.4	20.1
67.5°	4851.7	910.2	90.3	41.9	28.4	20.1	11.7	11.7	15.0	18.4	20.1
70°	2665.1	480.1	77.0	30.2	21.7	16.7	11.7	10.1	15.0	18.4	20.1
72.5°	650.8	200.7	70.2	23.4	20.1	15.0	10.1	10.1	15.0	18.4	20.1
75°	160.5	150.6	57.0	18.4	16.7	13.4	10.1	10.1	15.0	18.4	20.1
77.5°	75.3	199.1	38.4	16.7	15.0	11.7	10.1	10.1	15.0	18.4	18.4
80°	45.2	150.6	23.4	15.0	13.4	11.7	10.1	10.1	15.0	18.4	20.1
82.5°	26.8	43.5	16.7	15.0	13.4	10.1	10.1	10.1	15.0	18.4	20.1
85°	23.4	21.7	16.7	15.0	13.4	11.7	10.1	10.1	16.7	20.1	20.1
87.5°	18.4	16.7	15.0	13.4	13.4	11.7	10.1	10.1	15.0	18.4	20.1
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)