

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: P196601

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196601
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-7030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24688.2 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G4

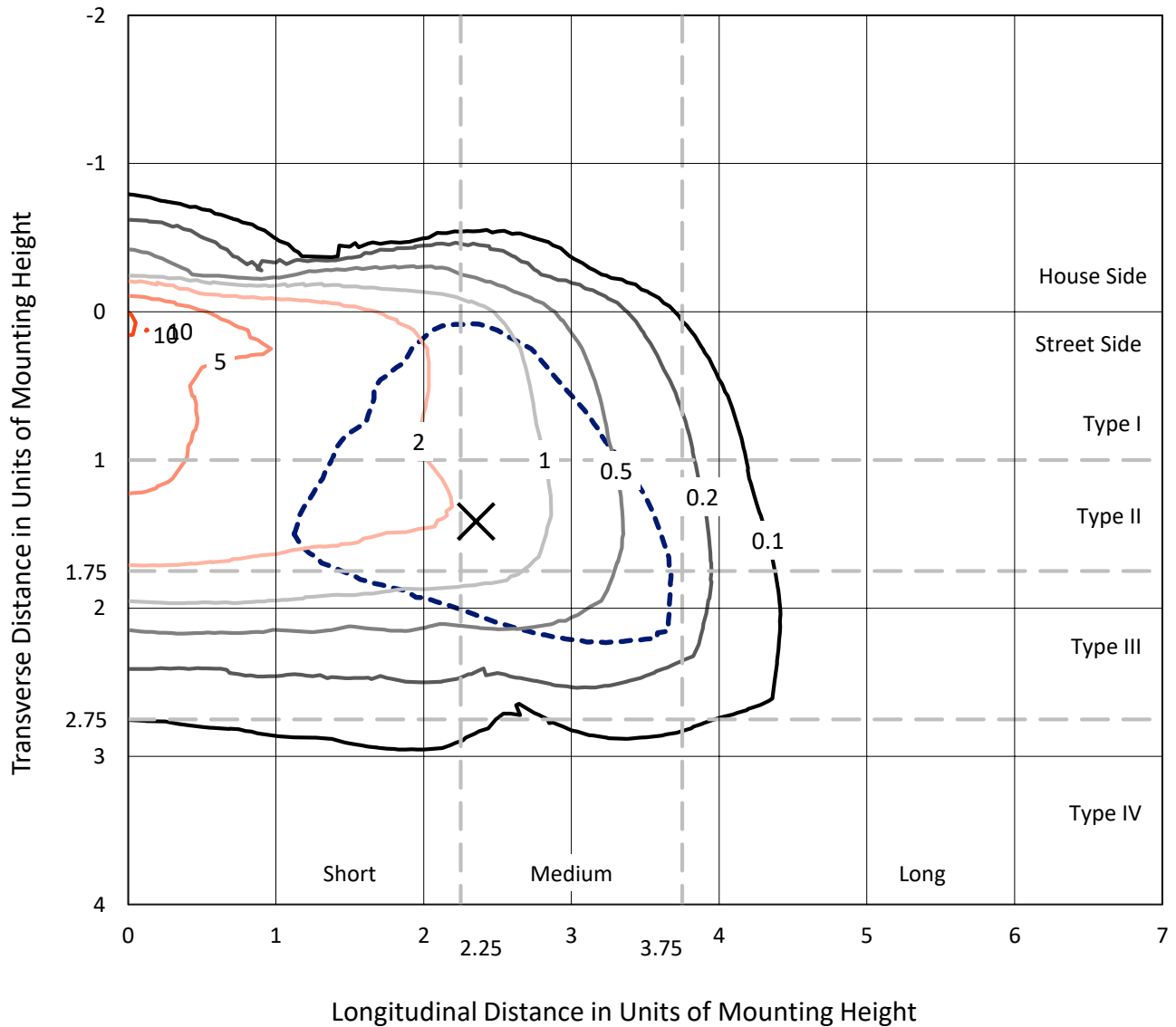
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

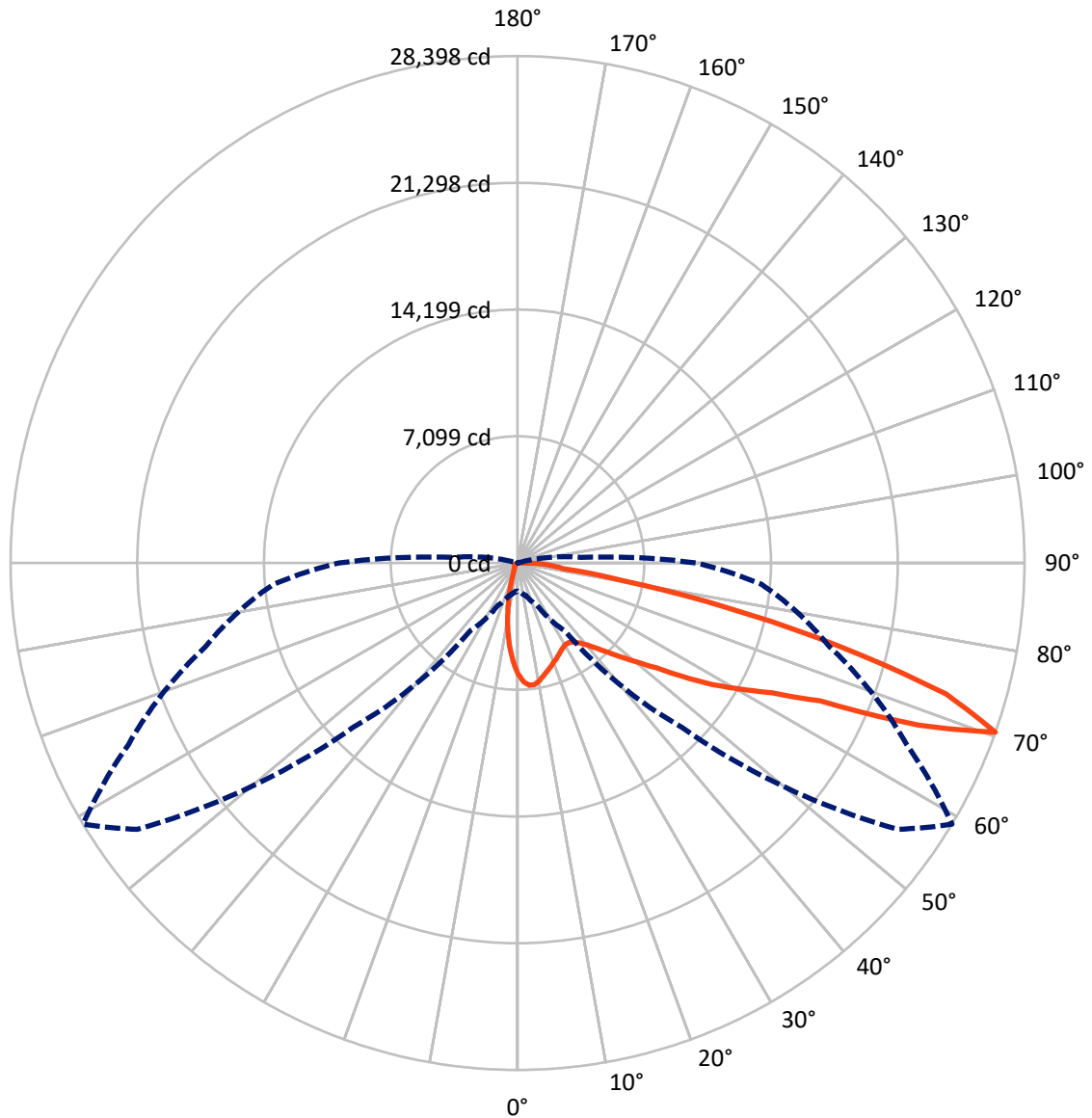


Based on 25 foot mounting height. Maximum calculated value = 10.6 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1897.9	0.0	1897.9
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	22790.4	0.0	22790.4
	% Fixture	92.3	0.0	92.3
Total	Lumens	24688.2	0.0	24688.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	513.3	2.1
10°-20°	1076.7	4.4
20°-30°	1457.5	5.9
30°-40°	2103.4	8.5
40°-50°	3493.3	14.1
50°-60°	5343.3	21.6
60°-70°	6645.9	26.9
70°-80°	3673.8	14.9
80°-90°	380.9	1.5
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°	24688.2	100.0
0°-180°	24688.2	100.0

Coefficient of Utilization



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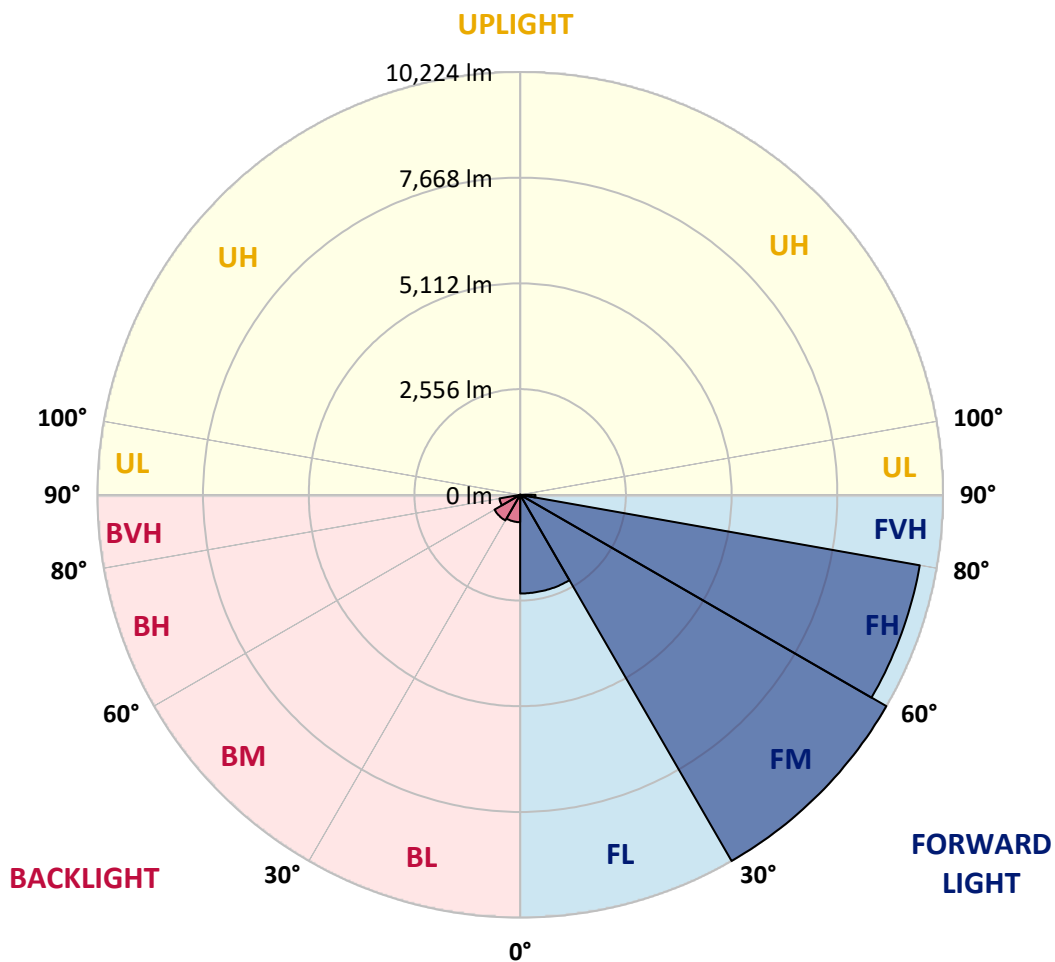
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2386.2	9.7			
FM	(30°-60°)	10223.6	41.4			
FH	(60°-80°)	9810.6	39.7			G4/12000
FVH	(80°-90°)	369.9	1.5			G3/500
BL	(0°-30°)	661.4	2.7	B2/1000		
BM	(30°-60°)	716.4	2.9	B1/1000		
BH	(60°-80°)	509.1	2.1	B2/1000		G2/1000
BVH	(80°-90°)	11.0	0.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7
2.5°	7056.6	7045.5	6998.9	6989.6	6937.4	6833.2	6712.2	6663.6	6565.0	6408.5	6235.3
5°	7174.0	7179.5	7183.2	7162.8	7155.4	7069.6	6935.6	6877.9	6745.5	6488.6	6171.9
7.5°	6734.4	6749.4	6795.9	6816.3	6905.7	6939.3	6911.4	6874.1	6769.8	6466.3	6021.2
10°	6270.7	6298.7	6348.9	6382.5	6492.3	6581.7	6695.3	6704.5	6682.3	6391.7	5851.7
12.5°	5872.1	5898.3	5954.1	6021.2	6132.8	6248.3	6417.8	6477.4	6551.9	6343.4	5730.6
15°	5529.5	5536.9	5590.9	5674.7	5821.9	5980.2	6181.4	6268.9	6414.1	6324.7	5637.4
17.5°	5229.5	5231.5	5266.9	5343.3	5522.0	5730.6	5965.2	6080.8	6265.2	6298.7	5555.5
20°	5032.2	5030.3	5032.2	5073.1	5231.5	5479.2	5764.1	5885.1	6121.7	6267.0	5471.7
22.5°	4965.2	4955.9	4913.1	4898.1	4998.7	5216.6	5557.4	5715.7	5993.2	6257.8	5410.3
25°	5047.1	5041.6	4950.2	4864.6	4873.9	5009.9	5346.9	5540.6	5892.7	6291.1	5395.3
27.5°	5311.5	5300.3	5160.8	4993.0	4886.9	4911.1	5190.5	5393.5	5812.6	6373.1	5415.9
30°	5658.0	5659.8	5510.8	5307.9	5058.2	4920.5	5106.7	5298.5	5758.5	6496.0	5460.6
32.5°	6043.4	6041.6	5935.5	5700.8	5382.3	5091.8	5143.9	5305.9	5765.9	6676.8	5546.2
35°	6442.0	6421.6	6386.2	6179.4	5806.9	5391.6	5313.4	5432.6	5844.2	6915.1	5691.6
37.5°	6902.0	6894.6	6930.0	6712.2	6332.1	5833.1	5611.4	5691.6	6041.6	7267.1	5926.1
40°	7634.0	7593.0	7609.8	7313.6	6924.5	6427.1	6028.6	6049.0	6356.3	7732.8	6296.7
42.5°	9028.9	8863.1	8552.2	7997.1	7576.2	7086.4	6574.2	6538.8	6801.5	8297.0	6784.7
45°	10695.7	10505.9	9721.8	8751.4	8228.1	7794.1	7248.5	7153.4	7349.0	8969.3	7414.3
47.5°	12087.1	11882.2	10842.9	9539.2	8891.1	8524.2	7995.3	7883.5	8004.6	9749.6	8170.3
50°	12561.9	12448.2	11535.7	10194.8	9559.7	9343.7	8932.1	8745.8	8775.6	10591.5	9053.1
52.5°	12344.0	12304.9	11694.0	10643.6	10178.0	10248.7	9958.2	9762.8	9729.2	11511.4	10029.0
55°	11884.0	11865.3	11567.4	10893.1	10723.7	11077.6	11397.9	11228.3	10911.8	12489.2	10835.5
57.5°	11226.5	11297.3	11511.4	11373.7	11394.2	11952.9	12735.0	12822.6	12349.6	13267.7	11433.2
60°	9470.3	9660.2	10641.8	11889.6	12844.9	13409.3	14167.3	14331.2	13567.6	13800.4	12124.2
62.5°	7000.8	7272.7	8671.4	10963.9	13644.0	16178.7	16072.5	15999.9	14729.7	14513.7	13381.3
65°	4112.2	4430.7	5613.3	8567.0	12438.9	17959.2	19629.7	18624.0	16500.9	15996.1	15383.3
67.5°	2048.6	2050.5	2585.0	4521.9	9192.8	16716.8	24822.1	24241.1	20266.6	18180.7	16173.1
70°	1575.6	1618.4	1912.7	2627.8	4648.6	13020.0	26012.1	28397.9	24051.0	18083.9	13722.2
72.5°	1335.3	1363.2	1702.3	2287.1	3475.2	7147.8	22518.3	25101.4	22950.4	15279.2	10114.6
75°	961.1	983.4	1506.6	2074.8	3199.5	3546.0	15446.7	18616.5	17219.7	10748.0	5566.8
77.5°	238.4	236.5	525.2	1683.5	2862.5	2953.8	8863.1	11938.0	9880.0	4400.9	1430.3
80°	106.2	102.4	119.2	353.9	2663.2	2788.0	3898.1	6028.6	3789.9	713.3	437.7
82.5°	74.6	70.8	74.6	130.3	890.3	2586.8	2355.9	2612.9	1387.5	243.9	186.3
85°	24.2	22.4	41.0	110.0	249.5	1491.8	2298.2	1951.8	1031.7	104.4	124.8
87.5°	3.8	3.8	14.9	59.5	72.6	497.2	1348.4	1352.1	463.7	61.5	55.8
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°	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7	6242.7
2.5°	6147.8	6037.8	5883.3	5728.8	5589.0	5445.7	5330.2	5276.1	5252.0	5218.4	5145.8
5°	6006.2	5806.9	5468.0	5134.6	4823.6	4525.6	4270.5	4125.2	3968.8	3961.3	3884.9
7.5°	5779.0	5496.0	4961.5	4443.7	3968.8	3514.4	3123.2	2869.9	2696.7	2588.8	2514.3
10°	5525.8	5162.6	4454.8	3726.7	3080.4	2473.3	1970.4	1642.6	1443.4	1342.8	1285.1
12.5°	5324.6	4868.3	3955.7	3039.5	2229.3	1532.8	1065.3	826.9	720.8	679.8	661.1
15°	5151.3	4598.2	3488.3	2424.8	1488.1	880.9	616.4	538.2	521.5	521.5	519.6
17.5°	4976.3	4337.5	3033.8	1821.5	936.8	577.3	486.1	474.9	476.8	482.4	482.4
20°	4810.5	4089.8	2596.2	1298.1	614.6	461.8	441.4	437.7	443.3	450.7	448.8
22.5°	4676.6	3871.9	2186.5	892.1	473.1	419.0	406.0	400.4	404.2	409.7	407.9
25°	4581.5	3685.7	1810.2	622.0	411.6	381.8	366.9	359.5	355.7	359.5	357.6
27.5°	4523.8	3529.3	1456.4	467.4	368.8	344.5	325.9	311.1	301.7	301.7	297.9
30°	4486.5	3382.1	1141.6	387.5	333.3	307.3	281.3	260.7	245.9	242.1	240.3
32.5°	4484.6	3255.5	853.0	342.6	299.8	270.1	238.4	212.3	195.6	191.9	190.0
35°	4531.2	3153.0	627.5	309.2	270.1	234.7	199.3	171.3	156.5	156.5	154.6
37.5°	4652.3	3093.4	474.9	283.1	245.9	204.9	167.6	141.5	128.5	132.2	132.2
40°	4877.7	3082.3	387.5	262.6	225.4	178.7	135.9	115.5	110.0	115.5	115.5
42.5°	5222.1	3141.9	344.5	247.7	206.7	152.8	113.6	98.7	96.8	102.4	102.4
45°	5671.0	3259.2	320.3	234.7	186.3	126.6	94.9	85.7	83.8	91.2	91.2
47.5°	6214.7	3417.5	297.9	219.7	165.7	104.4	80.1	72.6	72.6	80.1	82.0
50°	6859.2	3631.7	275.7	204.9	149.0	87.5	67.0	61.5	63.4	70.8	72.6
52.5°	7600.4	3894.3	255.1	191.9	130.3	70.8	55.8	52.1	54.0	61.5	63.4
55°	8239.2	4123.3	231.0	178.7	106.2	57.7	46.6	44.7	46.6	55.8	55.8
57.5°	8796.1	4343.2	208.5	158.3	83.8	46.6	37.2	37.2	41.0	50.3	52.1
60°	9535.5	4689.5	190.0	134.1	63.4	35.4	29.8	31.6	37.2	44.7	46.6
62.5°	10844.7	5278.0	165.7	111.8	46.6	28.0	24.2	26.1	33.6	42.8	44.7
65°	12483.6	5834.9	137.7	93.1	35.4	20.5	18.6	24.2	33.6	42.8	44.7
67.5°	12316.0	5075.1	108.0	74.6	26.1	16.7	14.9	22.4	31.6	42.8	44.7
70°	9988.1	3557.2	80.1	50.3	20.5	14.9	14.9	22.4	31.6	41.0	42.8
72.5°	6928.1	1979.8	61.5	33.6	18.6	14.9	13.0	20.5	29.8	41.0	42.8
75°	3296.5	607.2	48.4	24.2	16.7	13.0	11.2	20.5	29.8	41.0	42.8
77.5°	633.2	154.6	39.2	20.5	14.9	13.0	11.2	18.6	29.8	39.2	41.0
80°	214.1	69.0	31.6	18.6	14.9	13.0	11.2	18.6	28.0	37.2	39.2
82.5°	117.4	39.2	28.0	16.7	14.9	11.2	9.3	16.7	26.1	37.2	39.2
85°	91.2	28.0	22.4	16.7	14.9	11.2	9.3	16.7	26.1	35.4	37.2
87.5°	46.6	20.5	18.6	16.7	14.9	11.2	9.3	14.9	24.2	33.6	37.2
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)