

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: McGRAW-EDISON

Report Number: P299836

Luminaire Tested: **GLNA-AF-04-LED-E1-SL3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299836
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24288)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-SL3
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Medium OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23930.2 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

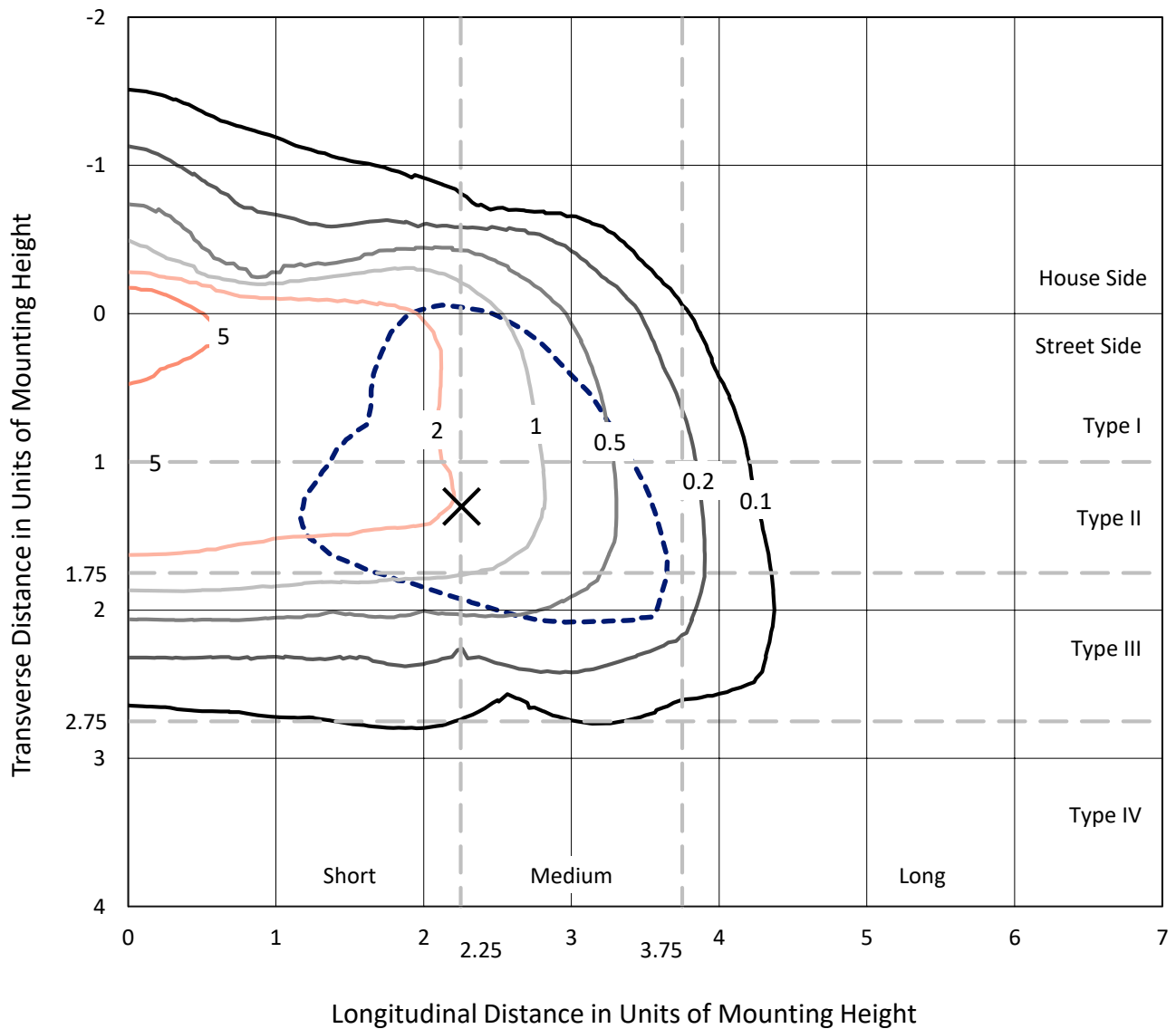
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

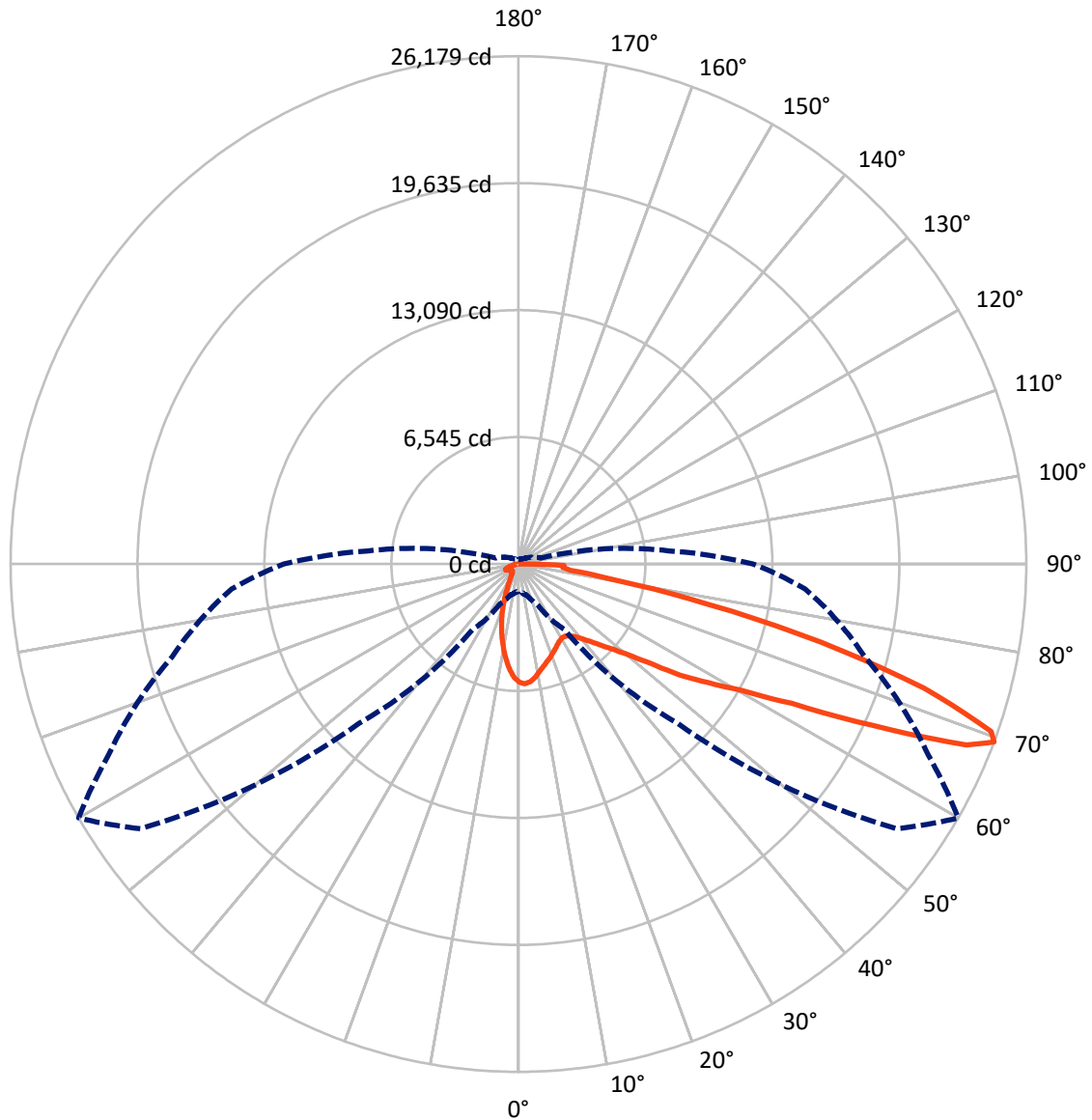


Based on 25 foot mounting height. Maximum calculated value = 9.8 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3404.5	0.0	3404.5
	% Fixture	14.2	0.0	14.2
Street Side	Lumens	20525.7	0.0	20525.7
	% Fixture	85.8	0.0	85.8
Total	Lumens	23930.2	0.0	23930.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	515.6	2.2
10°-20°	1098.5	4.6
20°-30°	1399.7	5.8
30°-40°	1924.2	8.0
40°-50°	3122.2	13.0
50°-60°	5007.2	20.9
60°-70°	6664.2	27.8
70°-80°	3598.2	15.0
80°-90°	600.4	2.5
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°	23930.2	100.0
0°-180°	23930.2	100.0



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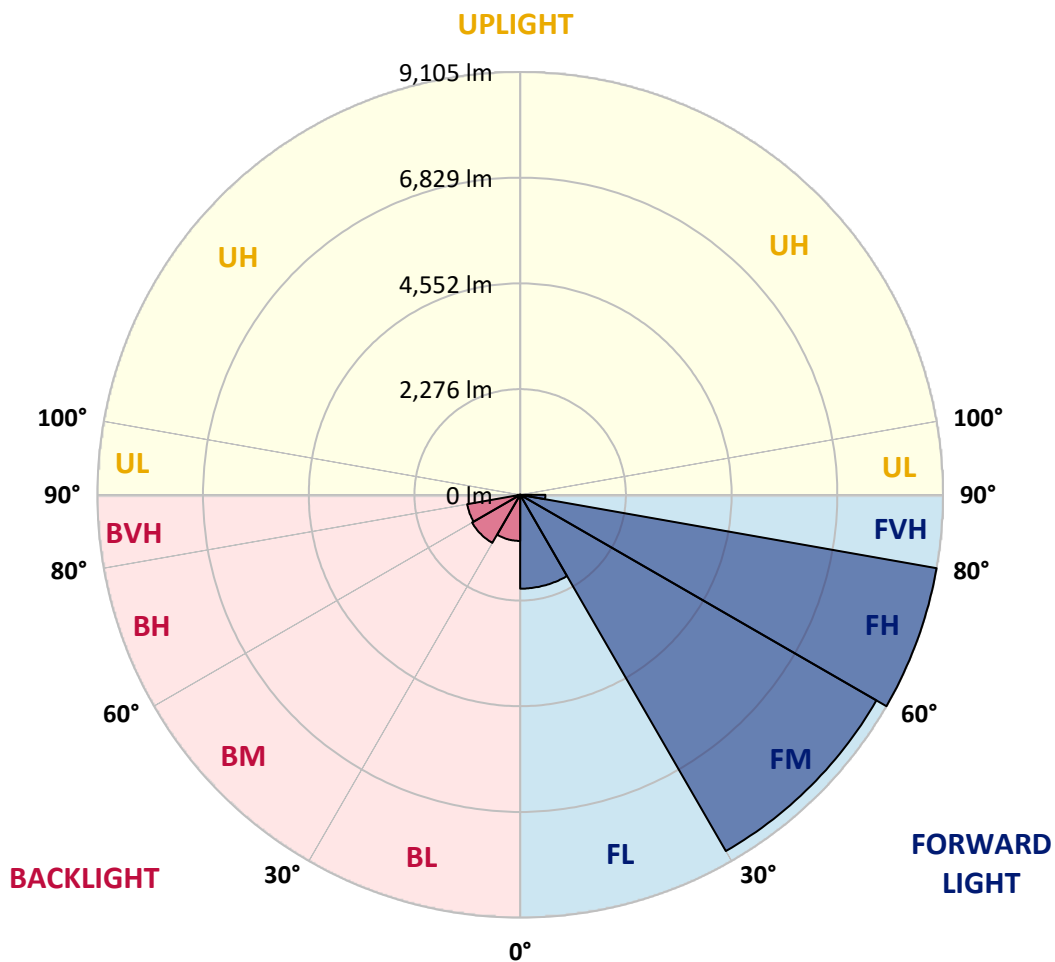
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2020.6	8.4			
FM (30°-60°)	8857.6	37.0			
FH (60°-80°)	9105.0	38.0			G4/12000
FVH (80°-90°)	542.6	2.3			G4/750
BL (0°-30°)	993.2	4.2	B2/1000		
BM (30°-60°)	1196.1	5.0	B2/2500		
BH (60°-80°)	1157.4	4.8	B3/2500		G3/2500
BVH (80°-90°)	57.8	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8
2.5°	6222.6	6236.5	6230.7	6227.3	6237.7	6221.5	6187.9	6177.5	6161.4	6123.2	6058.5
5°	5989.1	6030.7	6028.4	6059.6	6111.7	6125.5	6110.5	6112.8	6082.8	6035.4	5927.9
7.5°	5585.7	5603.0	5612.3	5680.5	5775.3	5851.6	5916.3	5937.1	5923.2	5882.8	5744.1
10°	5169.5	5183.4	5205.4	5285.1	5405.4	5510.5	5633.1	5703.6	5733.6	5726.7	5571.8
12.5°	4812.3	4826.2	4855.1	4945.3	5088.6	5218.1	5396.1	5484.0	5555.6	5598.4	5431.9
15°	4492.1	4522.2	4549.9	4654.0	4814.6	4984.6	5185.7	5296.7	5407.7	5503.6	5308.2
17.5°	4242.4	4272.5	4288.7	4383.5	4554.6	4762.6	4998.4	5129.1	5267.8	5425.0	5185.7
20°	4097.9	4111.8	4104.9	4158.1	4311.8	4532.6	4812.3	4963.8	5131.4	5351.0	5063.2
22.5°	4057.5	4058.6	4033.2	4027.4	4126.8	4313.0	4613.5	4797.3	5003.1	5302.5	4958.0
25°	4155.7	4152.3	4082.9	4026.3	4036.7	4145.3	4421.6	4635.5	4895.6	5292.1	4877.1
27.5°	4374.2	4384.6	4281.7	4175.4	4070.2	4066.7	4276.0	4501.4	4807.7	5339.5	4842.4
30°	4680.6	4697.9	4588.1	4452.8	4255.2	4092.2	4219.3	4421.6	4753.4	5437.7	4836.6
32.5°	5015.8	5034.3	4951.1	4808.9	4549.9	4249.4	4258.6	4428.5	4751.1	5575.3	4875.9
35°	5373.0	5393.8	5351.0	5230.8	4943.0	4539.5	4408.9	4540.7	4826.2	5785.7	4981.1
37.5°	5771.8	5804.2	5815.7	5701.3	5393.8	4922.2	4655.1	4753.4	4996.1	6078.1	5174.2
40°	6346.3	6391.4	6387.9	6223.8	5910.5	5438.9	5035.4	5060.9	5260.9	6468.9	5482.8
42.5°	7446.8	7456.1	7168.2	6811.0	6479.3	5982.2	5484.0	5463.1	5626.1	6963.6	5937.1
45°	8846.7	8808.5	8168.1	7478.0	7073.4	6606.4	6067.7	5966.0	6089.7	7567.0	6505.8
47.5°	10008.5	9920.6	9111.4	8158.9	7702.3	7285.0	6753.2	6575.2	6643.4	8251.4	7241.0
50°	10411.9	10346.0	9675.5	8725.3	8297.6	8112.7	7597.1	7345.1	7363.6	9067.5	8102.2
52.5°	10325.2	10315.9	9868.6	9098.7	8854.8	8981.9	8792.4	8451.4	8271.0	9973.8	9031.7
55°	10120.6	10140.2	9978.4	9533.3	9491.7	9821.2	10354.1	10102.1	9541.4	10888.2	9992.3
57.5°	9409.7	9460.5	9816.6	10080.1	10517.1	11007.2	11611.8	11540.1	10909.0	11876.5	11134.4
60°	7580.9	7698.8	8653.6	9973.8	11572.5	13105.3	13375.8	13209.4	12319.3	13103.0	12642.9
62.5°	5311.7	5434.3	6569.4	8635.2	11399.1	15475.1	16529.3	15811.5	14344.5	14909.8	14595.4
65°	2843.7	2902.7	3769.6	5991.4	9623.5	15964.0	21138.2	20045.8	17551.2	17137.4	16265.8
67.5°	1568.7	1601.0	1932.8	3025.2	6163.7	14057.8	24074.4	24899.8	21559.0	18620.5	15961.7
69°	1418.4	1448.4	1665.8	2291.1	4124.5	11623.4	23787.7	26179.4	23316.1	18473.7	14838.1
70°	1387.2	1414.9	1610.3	2112.0	3338.5	9580.7	22827.1	25852.3	23734.5	17947.7	13857.9
72.5°	1248.5	1278.5	1468.1	1897.0	2853.0	4776.5	18081.8	21858.4	21548.6	15561.8	10511.3
75°	1164.1	1191.8	1513.2	1857.7	2731.6	3022.9	11920.4	16109.7	15840.4	10885.8	5667.8
77.5°	498.2	495.9	701.7	1572.1	2772.0	2926.9	6405.3	10063.9	9181.9	4652.8	1627.6
80°	332.9	327.1	332.9	462.4	2542.0	2943.1	3355.8	5108.3	3858.7	1186.0	802.2
82.5°	286.7	282.1	292.5	282.1	893.6	3359.3	2853.0	2716.5	1834.5	673.9	397.7
85°	193.0	185.0	252.0	253.2	421.9	2984.7	3213.6	2294.6	1484.3	400.0	196.5
87.5°	92.5	90.2	146.8	179.2	247.4	1212.6	3605.5	2351.3	1497.0	204.6	93.6
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°	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8	6097.8
2.5°	6038.8	5991.4	5945.2	5889.7	5831.9	5767.2	5734.8	5702.4	5694.3	5685.1	5652.7
5°	5872.4	5805.3	5689.7	5562.6	5428.5	5297.8	5198.4	5136.0	5088.6	5064.3	5021.6
7.5°	5657.4	5559.1	5356.8	5137.2	4911.7	4706.0	4528.0	4415.8	4309.5	4259.8	4203.1
10°	5452.7	5305.9	4991.5	4667.8	4344.2	4033.2	3740.7	3533.8	3350.0	3247.1	3174.3
12.5°	5277.0	5075.9	4640.1	4202.0	3758.1	3315.3	2877.2	2532.7	2244.9	2093.5	2016.0
15°	5106.0	4863.2	4306.0	3750.0	3180.1	2577.8	2002.2	1611.4	1373.3	1278.5	1246.1
17.5°	4951.1	4640.1	3970.8	3294.5	2583.6	1855.3	1345.6	1130.5	1039.2	1008.0	997.6
20°	4783.4	4414.7	3622.8	2818.3	1961.7	1297.0	1050.8	956.0	919.0	909.8	905.1
22.5°	4621.6	4192.7	3289.9	2308.5	1409.1	1001.1	902.8	863.5	857.7	865.8	865.8
25°	4484.0	3993.9	2930.4	1775.6	1034.6	842.7	808.0	798.8	820.7	850.8	856.6
27.5°	4381.2	3830.9	2547.8	1310.9	824.2	732.9	731.7	746.8	801.1	858.9	870.5
30°	4310.6	3676.0	2138.6	945.6	691.3	645.0	663.5	695.9	775.7	857.7	879.7
32.5°	4274.8	3561.6	1712.0	731.7	591.9	566.4	597.6	636.9	715.6	791.8	820.7
35°	4302.5	3477.2	1309.7	610.4	522.5	502.9	535.2	573.4	619.6	652.0	673.9
37.5°	4406.6	3443.7	988.4	546.8	475.1	456.6	482.0	504.0	522.5	531.7	542.2
40°	4630.8	3479.5	791.8	514.4	448.5	425.4	435.8	443.9	455.5	464.7	469.3
42.5°	4961.5	3587.0	709.8	501.7	434.6	401.1	398.8	402.3	417.3	434.6	438.1
45°	5423.8	3776.6	704.0	509.8	427.7	381.5	371.1	375.7	398.8	425.4	430.0
47.5°	6014.6	4065.6	750.2	534.1	433.5	371.1	353.7	359.5	388.4	424.2	430.0
50°	6730.1	4469.0	827.7	569.9	458.9	373.4	347.9	351.4	381.5	420.8	426.6
52.5°	7575.1	5041.2	912.1	604.6	485.5	388.4	352.6	344.5	372.2	406.9	413.8
55°	8514.9	5775.3	998.8	635.8	499.4	406.9	361.8	335.2	354.9	383.8	389.6
57.5°	9668.6	6801.8	1149.0	665.8	508.6	419.6	371.1	326.0	332.9	353.7	358.4
60°	11230.3	8253.7	1413.8	715.6	529.4	424.2	369.9	317.9	311.0	322.5	324.8
62.5°	13101.8	9830.4	1634.6	778.0	564.1	427.7	363.0	312.1	292.5	292.5	294.8
65°	14212.7	10252.4	1512.0	830.0	593.0	424.2	354.9	306.3	278.6	265.9	267.0
67.5°	13270.6	9016.6	1295.9	840.4	591.9	408.1	342.2	295.9	264.7	245.1	243.9
69°	12090.4	7779.7	1198.7	812.7	564.1	387.3	326.0	284.4	254.3	233.5	232.4
70°	11139.0	7024.9	1135.2	782.6	534.1	372.2	313.3	274.0	246.2	226.6	224.3
72.5°	8098.8	4603.1	969.9	672.8	440.4	312.1	270.5	240.4	219.6	208.1	205.8
75°	4047.1	2195.2	787.2	545.6	337.5	249.7	221.9	201.1	190.7	188.4	187.3
77.5°	1329.4	1005.7	563.0	406.9	250.8	195.4	179.2	164.1	161.8	168.8	166.5
80°	730.6	584.9	357.2	269.3	171.1	143.3	141.0	132.9	136.4	148.0	145.7
82.5°	372.2	304.0	220.8	161.8	115.6	102.9	112.1	107.5	112.1	122.5	121.4
85°	183.8	166.5	139.9	98.3	76.3	65.9	79.8	83.2	85.5	93.6	93.6
87.5°	106.3	98.3	74.0	46.2	38.1	34.7	46.2	45.1	53.2	57.8	56.6
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)