

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: P300436

Luminaire Tested: **GLNA-AF-04-LED-E1-AFL-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P300436  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24165)  
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-AFL-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Automotive Frontline OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

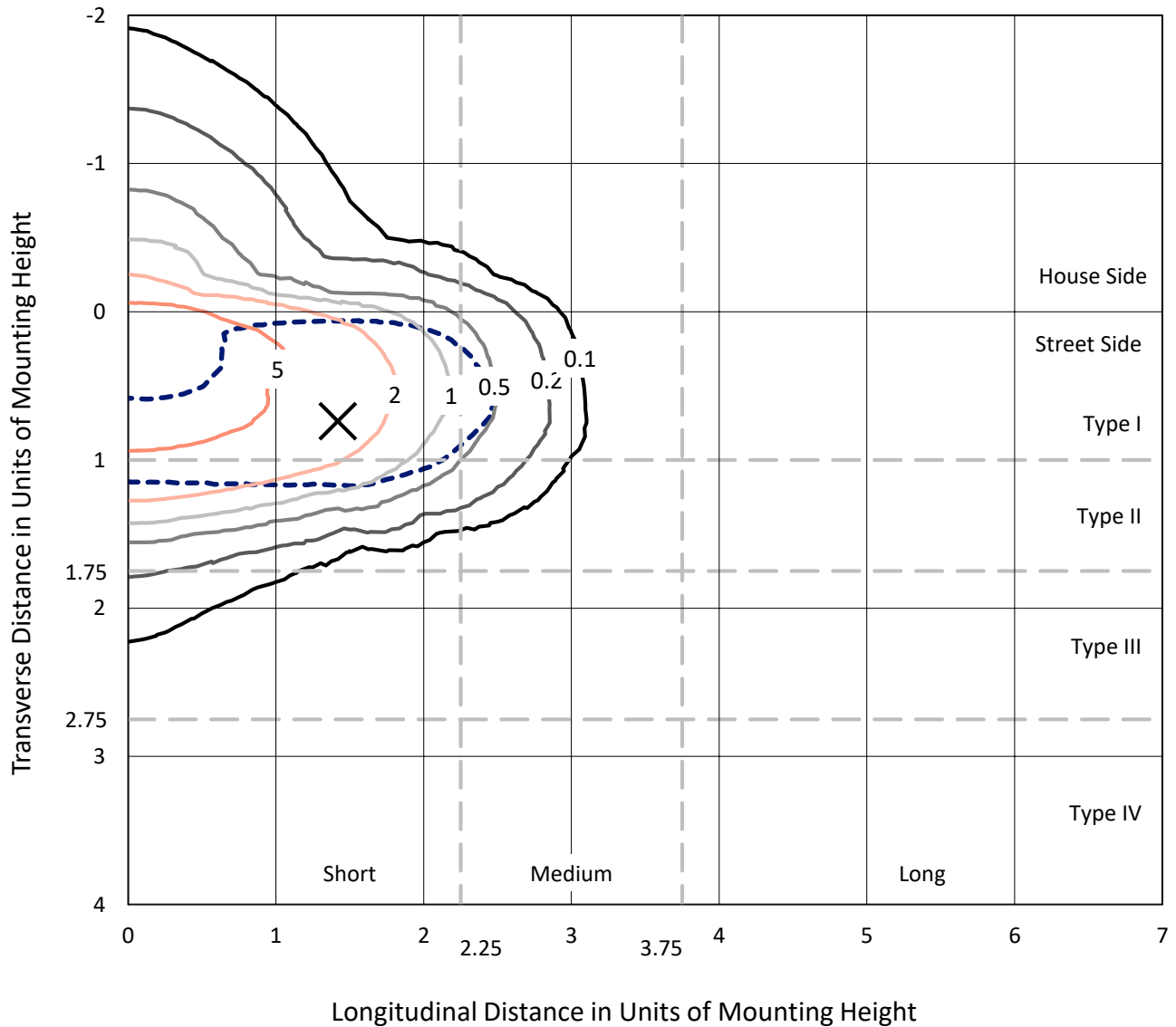
Lumens per Lamp: N/A  
Luminaire Lumens: 16172.3 lumens  
Efficiency: N/A  
Efficacy: 125.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (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

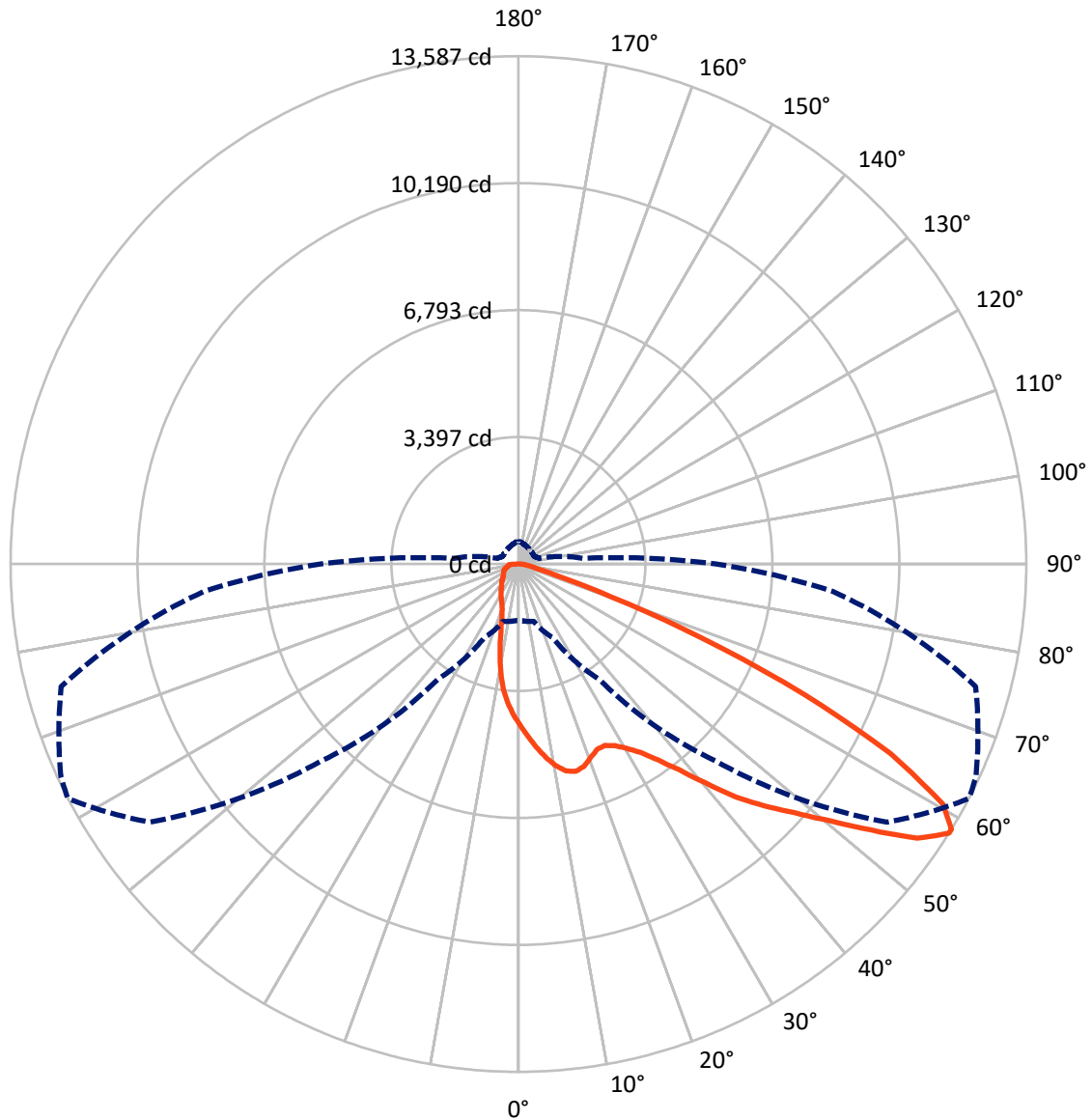
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.4 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral    - - - Horizontal Cone Through 58-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2466.3	0.0	2466.3
	% Fixture	15.3	0.0	15.3
<b>Street Side</b>	Lumens	13706.0	0.0	13706.0
	% Fixture	84.7	0.0	84.7
<b>Total</b>	Lumens	16172.3	0.0	16172.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	384.2	2.4
10°-20°	982.1	6.1
20°-30°	1587.6	9.8
30°-40°	2520.2	15.6
40°-50°	3687.6	22.8
50°-60°	3857.0	23.8
60°-70°	2278.7	14.1
70°-80°	641.9	4.0
80°-90°	233.1	1.4
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°	16172.3	100.0
0°-180°	16172.3	100.0



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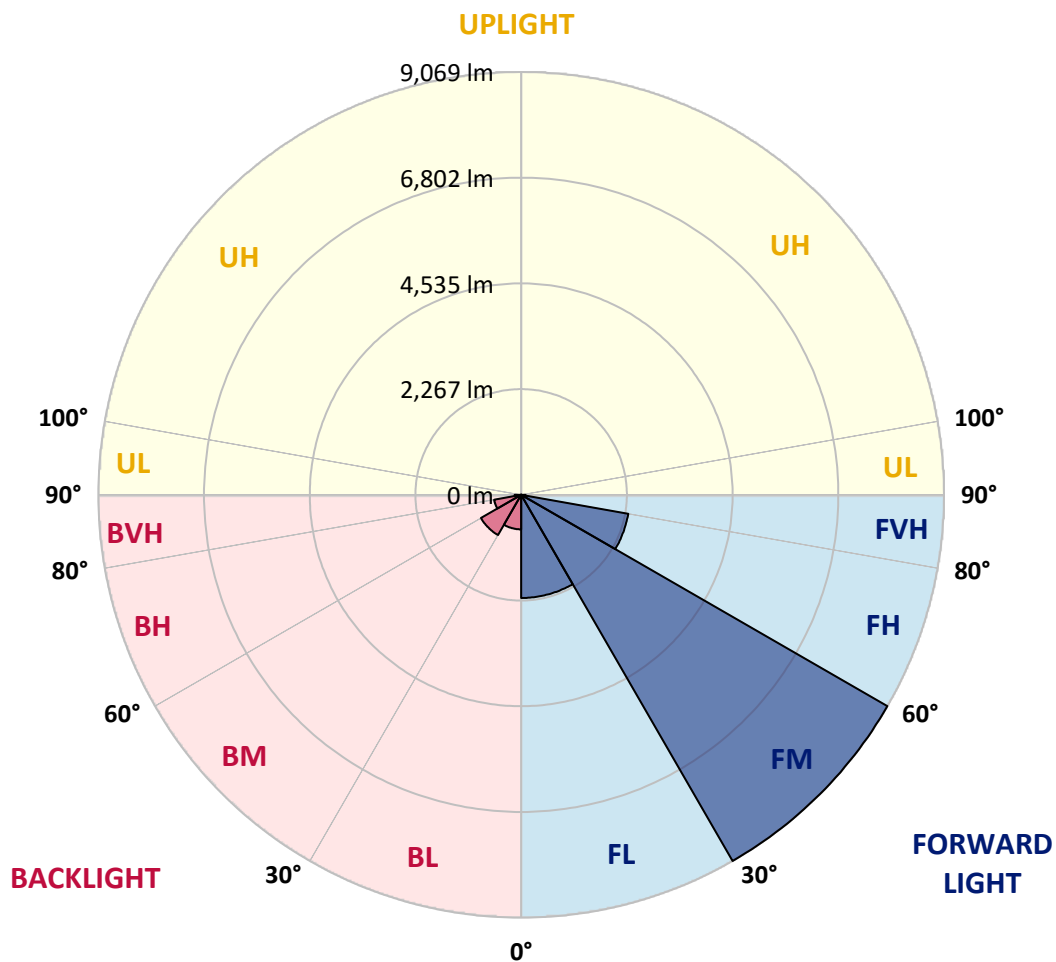
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2212.6	13.7			
FM	(30°-60°)	9069.4	56.1			
FH	(60°-80°)	2332.1	14.4			G2/5000
FVH	(80°-90°)	91.9	0.6			G1/100
BL	(0°-30°)	741.3	4.6	B2/1000		
BM	(30°-60°)	995.5	6.2	B1/1000		
BH	(60°-80°)	588.5	3.6	B2/1000		G2/1000
BVH	(80°-90°)	141.1	0.9			G2/225
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°	62.5°	65°	75°	85°
0°	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9
2.5°	4908.9	4869.3	4844.2	4822.1	4793.1	4731.5	4648.4	4595.9	4569.2	4478.6	4371.2
5°	5390.2	5355.2	5329.3	5299.6	5247.8	5151.1	5017.0	4910.4	4857.9	4676.6	4461.9
7.5°	5277.5	5291.9	5336.9	5415.3	5482.3	5469.4	5349.8	5214.3	5145.0	4892.9	4567.0
10°	4598.2	4623.3	4701.0	4884.5	5181.5	5486.1	5579.0	5485.4	5415.3	5106.9	4675.1
12.5°	4461.9	4461.1	4467.2	4515.9	4692.6	5121.4	5586.7	5681.1	5639.2	5311.0	4785.5
15°	4517.5	4519.0	4514.4	4535.0	4589.8	4759.6	5353.6	5756.5	5786.2	5516.6	4899.8
17.5°	4663.7	4659.9	4642.4	4642.4	4662.2	4728.4	5079.5	5686.4	5823.5	5698.6	5000.3
20°	4908.9	4891.4	4844.9	4802.3	4781.0	4816.7	4966.8	5525.0	5758.8	5857.8	5083.3
22.5°	5205.9	5192.2	5116.8	5025.4	4951.5	4950.8	5024.6	5384.1	5646.8	6007.8	5153.3
25°	5589.7	5567.6	5455.7	5309.5	5180.0	5130.5	5151.1	5377.2	5585.9	6170.8	5215.8
27.5°	6040.5	6000.2	5867.7	5656.7	5466.3	5366.6	5336.9	5501.4	5641.5	6372.6	5302.6
30°	6587.3	6540.9	6371.0	6096.1	5827.3	5663.6	5600.4	5721.5	5825.8	6618.5	5442.0
32.5°	7209.5	7142.5	6946.0	6642.9	6289.6	6039.8	5937.0	6012.4	6095.4	6914.8	5616.4
35°	8069.3	7989.3	7705.3	7287.2	6888.1	6544.7	6380.2	6435.0	6515.7	7356.5	5868.4
37.5°	8655.7	8619.9	8431.0	8038.1	7604.0	7208.7	6954.4	6986.4	7032.1	7908.6	6191.3
40°	8650.3	8664.8	8668.6	8672.4	8376.9	7998.5	7725.1	7691.6	7682.4	8514.8	6558.4
42.5°	8217.0	8276.4	8468.3	8857.5	9037.2	8863.6	8613.0	8516.3	8468.3	9229.1	6947.5
45°	7553.7	7585.7	7945.2	8705.2	9375.3	9720.3	9530.7	9226.1	9139.2	9885.6	7270.4
47.5°	7211.8	7246.8	7473.0	8301.6	9371.5	10412.5	10522.2	9941.9	9786.6	10456.7	7549.2
50°	6397.7	6470.8	6755.6	7599.4	9029.6	10730.9	11558.7	10794.8	10473.5	11012.6	7828.6
52.5°	4902.8	5015.5	5334.6	6444.9	8162.2	10573.2	12388.0	11829.0	11375.1	11588.4	8068.5
55°	3092.6	3176.4	3444.4	4551.7	6529.4	9753.0	12702.5	12947.7	12544.1	12133.6	8276.4
57.5°	1681.5	1718.8	1819.3	2513.1	4247.1	7939.8	12244.0	13584.4	13416.8	12596.6	8433.3
58°	1504.8	1529.9	1592.4	2178.0	3766.6	7444.1	12040.7	13586.6	13502.9	12664.4	8445.5
60°	1116.4	1103.5	1047.9	1242.8	2096.5	5142.7	10811.6	13042.9	13288.9	12747.4	8386.1
62.5°	980.9	949.6	836.2	823.2	1019.7	2369.2	8272.6	11172.6	11753.6	12273.7	8025.1
65°	921.5	888.0	741.7	694.5	735.6	1002.2	4873.1	8379.2	9108.0	10837.5	7102.1
67.5°	877.3	833.9	681.6	616.8	619.9	662.5	1953.4	5277.5	6097.7	8228.4	5524.2
70°	834.6	787.4	630.6	555.9	538.4	523.9	776.8	2641.8	3385.8	5197.5	3522.1
72.5°	789.0	742.5	585.6	507.9	473.7	425.7	507.2	1080.6	1509.4	2459.0	1597.7
75°	722.7	680.8	540.7	465.3	416.6	352.6	383.1	564.3	677.0	979.3	769.9
77.5°	641.2	606.9	490.4	430.3	369.3	286.3	294.7	391.4	434.1	560.5	457.7
80°	460.7	472.9	436.4	386.9	329.0	232.3	226.2	285.6	308.4	360.2	297.8
82.5°	323.7	330.5	361.0	316.0	271.9	182.8	166.8	201.0	214.8	236.8	160.7
85°	223.1	215.5	247.5	220.1	196.5	121.8	114.2	136.3	144.7	147.0	83.0
87.5°	134.0	134.0	143.2	118.0	105.9	63.2	61.7	77.7	83.0	79.2	45.7
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°	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9	4295.9
2.5°	4307.3	4253.2	4138.2	4046.1	3929.5	3808.5	3740.7	3668.3	3618.8	3583.0	3640.2
5°	4340.0	4229.6	3992.0	3766.6	3517.6	3258.6	3062.2	2879.4	2752.2	2673.0	2747.6
7.5°	4391.8	4222.0	3843.5	3458.2	3011.1	2580.1	2194.8	1953.4	1812.5	1743.2	1786.6
10°	4451.2	4209.8	3669.1	3040.1	2400.4	1857.4	1569.5	1472.1	1440.1	1427.1	1433.2
12.5°	4500.7	4183.9	3455.1	2534.4	1802.6	1466.7	1383.7	1381.4	1388.3	1389.8	1392.1
15°	4535.7	4145.8	3137.5	2007.4	1441.6	1336.5	1331.9	1345.6	1358.6	1363.9	1367.0
17.5°	4559.3	4067.4	2778.9	1587.1	1291.6	1273.3	1284.0	1301.5	1315.2	1319.0	1322.0
20°	4557.1	3952.4	2351.6	1323.6	1210.1	1210.1	1228.4	1242.1	1242.8	1238.3	1240.5
22.5°	4533.5	3794.8	1937.4	1183.4	1137.7	1150.7	1169.0	1156.0	1102.7	1067.7	1070.0
25°	4493.9	3606.7	1582.5	1094.3	1070.7	1093.6	1088.2	990.8	914.6	880.3	880.3
27.5°	4458.8	3384.3	1309.8	1016.7	1003.7	1031.9	937.5	849.1	817.1	801.1	795.8
30°	4433.7	3144.4	1127.8	942.0	940.5	919.9	813.3	789.0	783.6	770.7	766.1
32.5°	4439.8	2901.5	1011.3	876.5	881.9	787.4	753.9	759.3	754.7	741.0	734.9
35°	4490.0	2670.7	935.2	817.1	801.1	711.3	718.9	728.8	727.3	708.2	702.1
37.5°	4579.9	2452.2	884.9	767.6	699.1	673.2	685.4	700.6	696.8	683.9	679.3
40°	4674.3	2246.5	843.8	728.8	638.9	647.3	658.0	666.3	670.2	674.0	670.9
42.5°	4766.5	2031.8	793.5	689.2	613.8	622.9	627.5	635.9	656.4	670.9	670.2
45°	4821.3	1830.0	741.7	632.8	594.0	599.3	596.3	613.0	638.2	661.8	662.5
47.5°	4882.2	1673.1	700.6	581.1	575.0	578.8	569.6	586.4	609.2	638.2	641.2
50°	4956.1	1579.4	667.9	539.9	549.1	549.1	546.8	562.0	594.0	627.5	633.6
52.5°	5039.9	1561.2	640.5	510.2	523.2	522.4	524.7	547.5	582.6	615.3	620.7
55°	5141.9	1610.7	610.8	488.1	498.0	501.1	508.7	534.6	564.3	601.6	603.9
57.5°	5260.7	1711.2	587.1	470.6	475.2	485.1	497.3	520.9	552.9	594.0	596.3
58°	5280.5	1732.5	583.3	469.1	470.6	482.1	495.8	518.6	550.6	595.5	597.8
60°	5281.3	1803.3	575.0	462.3	453.1	472.2	487.4	510.2	546.8	600.9	606.2
62.5°	5093.9	1802.6	568.9	452.4	434.8	458.4	476.0	502.6	543.0	613.8	624.5
65°	4485.5	1638.1	539.9	437.1	420.4	446.3	466.1	497.3	553.6	670.2	677.0
67.5°	3508.4	1342.6	485.9	415.8	401.3	434.1	460.0	496.5	565.1	683.1	687.7
70°	2319.7	1004.5	426.5	391.4	381.5	419.6	463.0	522.4	552.1	655.7	643.5
72.5°	1204.0	705.2	378.5	361.0	358.7	406.7	507.2	519.4	539.2	616.8	601.6
75°	632.1	489.7	336.6	327.5	331.3	403.6	598.6	505.7	522.4	590.2	619.1
77.5°	386.9	395.2	300.8	297.0	304.6	394.5	597.8	488.1	498.0	543.0	575.0
80°	258.9	320.6	273.4	274.2	279.5	361.0	536.9	460.7	468.3	513.3	546.0
82.5°	163.7	189.6	248.3	261.2	254.4	297.8	456.2	419.6	430.3	587.1	620.7
85°	83.0	118.8	215.5	251.3	229.2	208.7	370.1	367.8	373.2	423.4	442.5
87.5°	38.1	65.5	168.3	219.3	172.9	130.2	268.8	272.6	294.0	300.8	300.8
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)