

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: P299863

Luminaire Tested: **GLNA-AF-09-LED-E1-SL3-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299863  
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-09-LED-E1-SL3-7027  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 2700K 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: 46078.7 lumens  
Efficiency: N/A  
Efficacy: 92.0 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B3 - U0 - G5

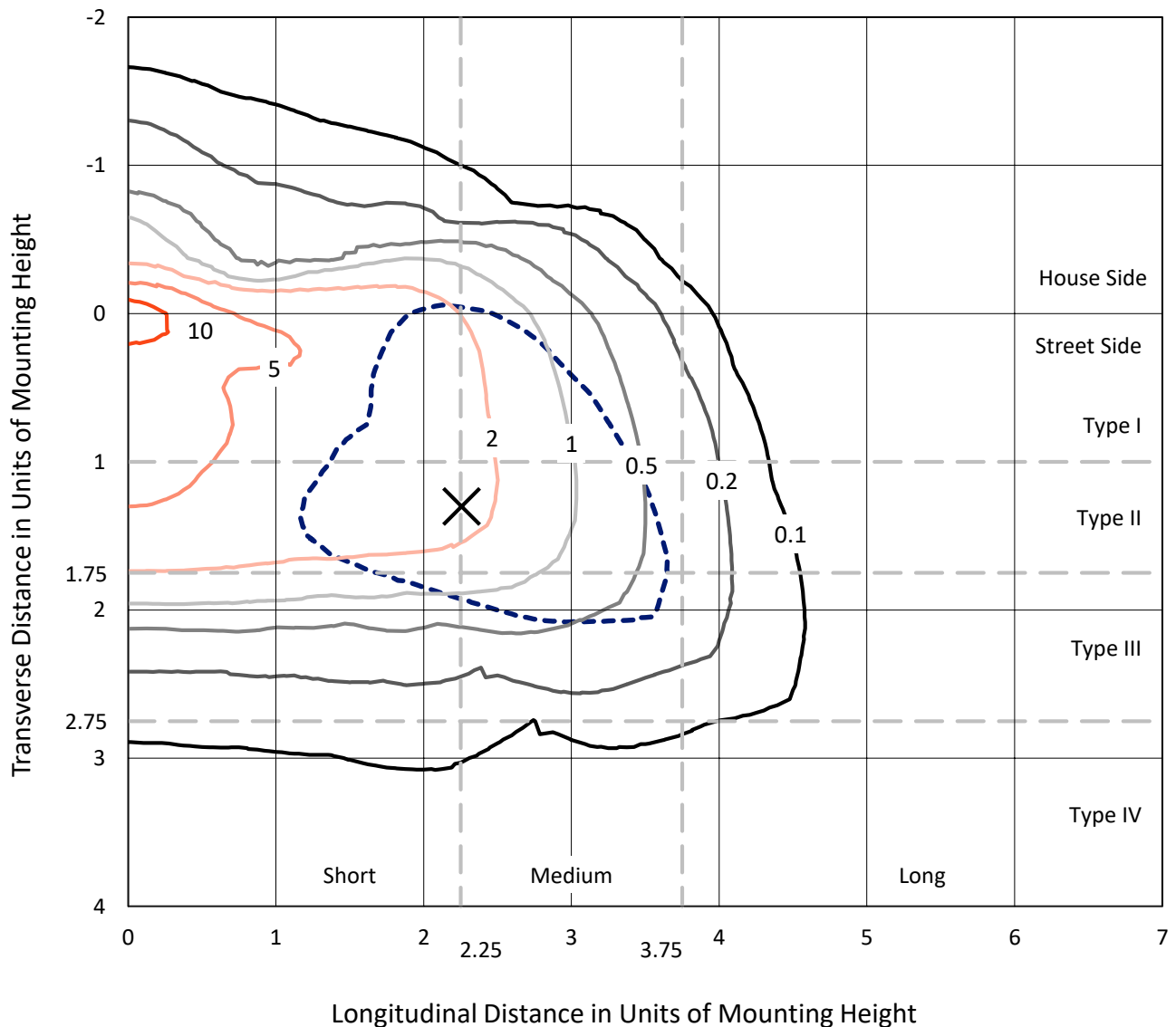
Input Watts (W): 501  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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 CATALOG NUMBER: GLNA-AF-09-LED-E1-SL3-7027

### Iso-Footcandle Lines of Horizontal Illumination

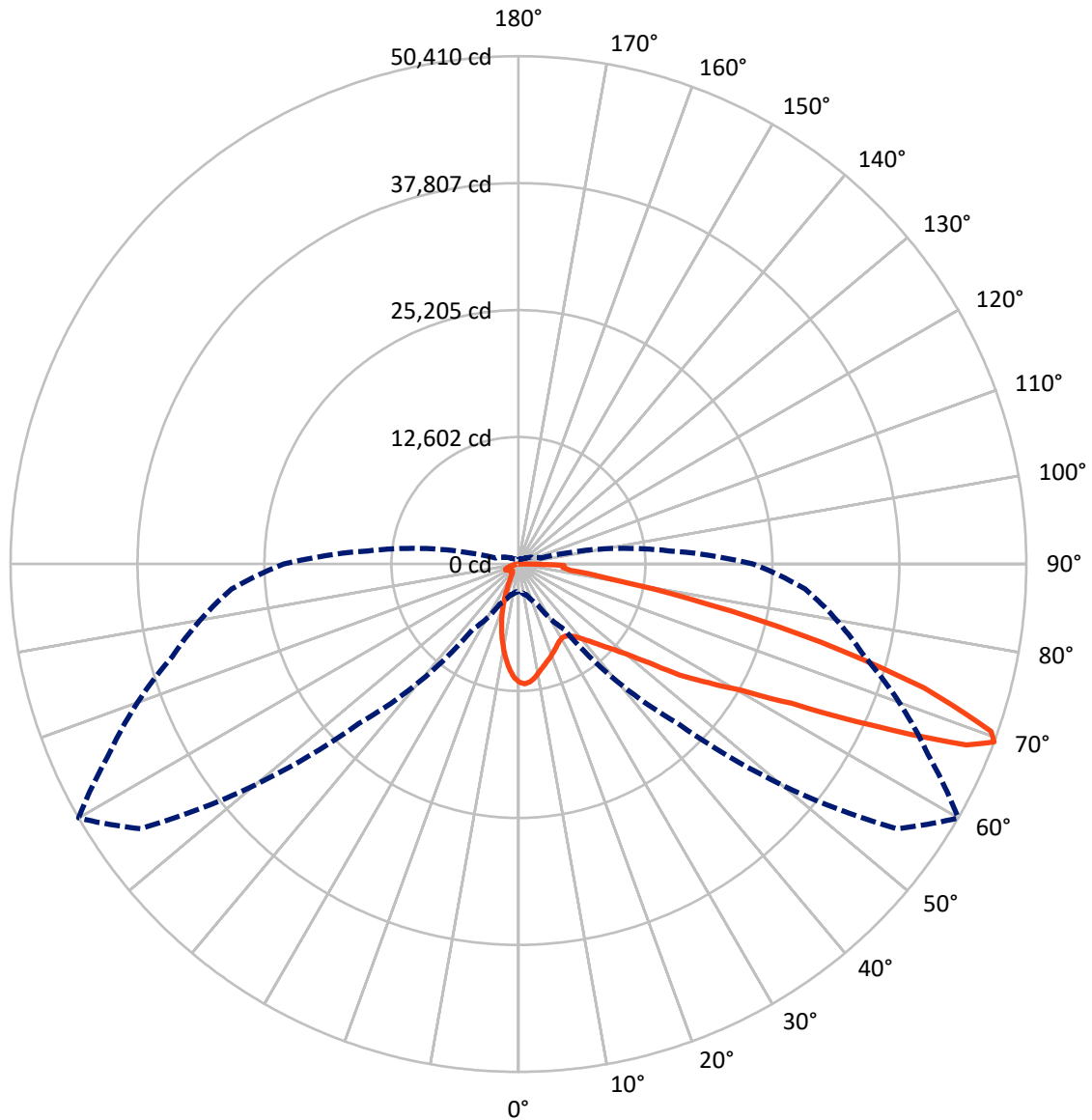
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 13 fc  
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P299863  
CATALOG NUMBER: GLNA-AF-09-LED-E1-SL3-7027

### Luminous Intensity Polar Plot



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

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CATALOG NUMBER: GLNA-AF-09-LED-E1-SL3-7027

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6555.5	0.0	6555.5
	% Fixture	14.2	0.0	14.2
<b>Street Side</b>	Lumens	39523.2	0.0	39523.2
	% Fixture	85.8	0.0	85.8
<b>Total</b>	Lumens	46078.7	0.0	46078.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	992.8	2.2
10°-20°	2115.2	4.6
20°-30°	2695.2	5.8
30°-40°	3705.1	8.0
40°-50°	6012.0	13.0
50°-60°	9641.6	20.9
60°-70°	12832.3	27.8
70°-80°	6928.5	15.0
80°-90°	1156.1	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°	46078.7	100.0
0°-180°	46078.7	100.0

**Coefficient of Utilization**



REPORT NUMBER: P299863

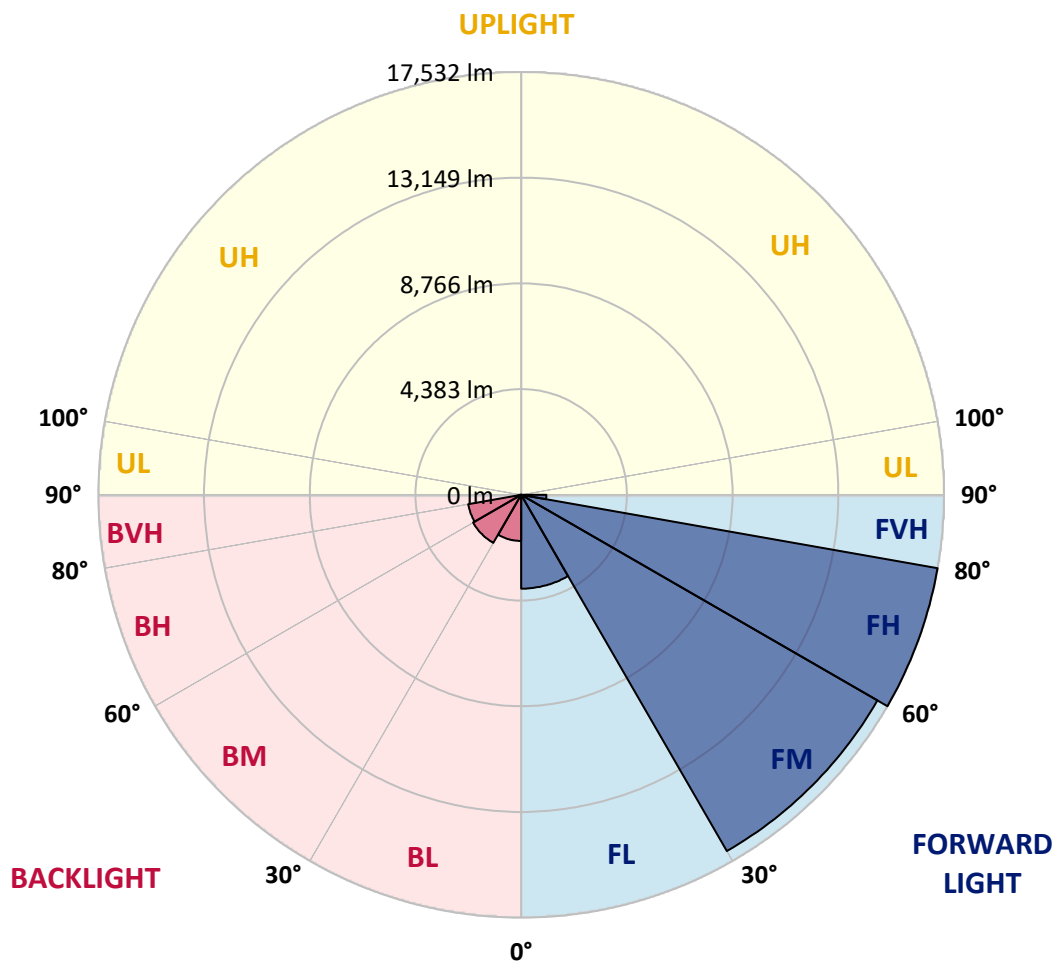
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3890.7	8.4			
FM (30°-60°)	17055.7	37.0			
FH (60°-80°)	17532.1	38.0			G5
FVH (80°-90°)	1044.7	2.3			G5
BL (0°-30°)	1912.5	4.2	B3/2500		
BM (30°-60°)	2303.1	5.0	B2/2500		
BH (60°-80°)	2228.7	4.8	B3/2500		G3/2500
BVH (80°-90°)	111.3	0.2			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G5**

Type III Medium





REPORT NUMBER: P299863

CATALOG NUMBER: GLNA-AF-09-LED-E1-SL3-7027

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6
2.5°	11982.0	12008.7	11997.5	11990.9	12010.9	11979.7	11915.2	11895.1	11864.0	11790.5	11665.9
5°	11532.3	11612.5	11608.0	11668.1	11768.3	11795.0	11766.0	11770.5	11712.6	11621.4	11414.4
7.5°	10755.5	10788.9	10806.7	10938.0	11120.5	11267.4	11392.1	11432.2	11405.4	11327.5	11060.4
10°	9954.2	9980.9	10023.2	10176.8	10408.2	10610.8	10846.7	10982.5	11040.4	11027.0	10728.8
12.5°	9266.4	9293.1	9348.7	9522.3	9798.4	10047.7	10390.4	10559.6	10697.6	10780.0	10459.4
15°	8649.8	8707.7	8761.1	8961.4	9270.8	9598.0	9985.3	10199.0	10412.7	10597.4	10221.3
17.5°	8169.0	8226.9	8258.0	8440.6	8770.0	9170.7	9624.7	9876.3	10143.4	10446.1	9985.3
20°	7890.8	7917.5	7904.1	8006.5	8302.6	8727.7	9266.4	9558.0	9880.7	10303.6	9749.4
22.5°	7812.9	7815.1	7766.1	7755.0	7946.4	8304.8	8883.5	9237.4	9633.6	10210.1	9546.8
25°	8002.1	7995.4	7861.8	7752.8	7772.8	7982.0	8514.0	8925.8	9426.6	10190.1	9391.0
27.5°	8422.8	8442.8	8244.7	8039.9	7837.3	7830.7	8233.6	8667.6	9257.5	10281.4	9324.2
30°	9012.6	9046.0	8834.5	8574.1	8193.5	7879.6	8124.5	8514.0	9152.8	10470.6	9313.1
32.5°	9658.1	9693.7	9533.5	9259.7	8761.1	8182.4	8200.2	8527.4	9148.4	10735.5	9388.8
35°	10345.9	10386.0	10303.6	10072.1	9517.9	8741.1	8489.5	8743.3	9293.1	11140.6	9591.3
37.5°	11113.9	11176.2	11198.4	10978.1	10386.0	9477.8	8963.6	9152.8	9620.3	11703.7	9963.1
40°	12220.1	12306.9	12300.3	11984.2	11381.0	10472.8	9696.0	9744.9	10130.0	12456.1	10557.4
42.5°	14339.2	14357.0	13802.7	13114.9	12476.1	11519.0	10559.6	10519.5	10833.4	13408.7	11432.2
45°	17034.7	16961.3	15728.1	14399.3	13620.2	12720.9	11683.7	11487.8	11726.0	14570.7	12527.3
47.5°	19271.7	19102.6	17544.4	15710.3	14831.1	14027.5	13003.6	12660.8	12792.2	15888.4	13943.0
50°	20048.6	19921.7	18630.7	16801.0	15977.4	15621.3	14628.5	14143.3	14178.9	17459.9	15601.2
52.5°	19881.6	19863.8	19002.4	17520.0	17050.3	17295.1	16930.1	16273.5	15926.2	19205.0	17390.9
55°	19487.6	19525.5	19213.9	18356.9	18276.8	18911.1	19937.3	19452.0	18372.5	20965.6	19240.6
57.5°	18118.7	18216.7	18902.2	19409.7	20251.1	21194.9	22359.0	22221.0	21005.7	22868.8	21439.7
60°	14597.4	14824.4	16663.0	19205.0	22283.4	25234.9	25755.7	25435.2	23721.3	25230.4	24344.5
62.5°	10228.0	10463.9	12649.7	16627.4	21949.5	29798.0	31828.0	30445.7	27621.0	28709.5	28104.1
65°	5475.7	5589.2	7258.6	11536.8	18530.5	30739.5	40702.6	38599.1	33795.6	32998.8	31320.5
67.5°	3020.5	3082.9	3721.7	5825.1	11868.4	27069.0	46356.3	47945.6	41512.8	35854.6	30735.1
69°	2731.2	2789.0	3207.5	4411.7	7942.0	22381.3	45804.3	50409.7	44896.1	35571.9	28571.5
70°	2671.1	2724.5	3100.7	4066.7	6428.4	18448.2	43954.6	49779.7	45701.9	34559.1	26683.9
72.5°	2404.0	2461.8	2826.9	3652.7	5493.5	9197.4	34817.3	42089.3	41492.8	29964.9	20240.0
75°	2241.5	2294.9	2913.7	3577.0	5259.8	5820.7	22953.4	31020.0	30501.3	20961.2	10913.5
77.5°	959.4	954.9	1351.1	3027.2	5337.7	5635.9	12333.6	19378.6	17680.2	8959.2	3134.0
80°	641.1	629.9	641.1	890.4	4894.7	5667.1	6461.8	9836.2	7430.0	2283.8	1544.8
82.5°	552.0	543.1	563.1	543.1	1720.6	6468.4	5493.5	5230.8	3532.5	1297.7	765.7
85°	371.7	356.1	485.2	487.5	812.4	5747.2	6188.0	4418.4	2858.0	770.2	378.4
87.5°	178.1	173.6	282.7	345.0	476.3	2335.0	6942.5	4527.5	2882.5	394.0	180.3
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°	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6	11741.6
2.5°	11628.0	11536.8	11447.7	11340.9	11229.6	11105.0	11042.6	10980.3	10964.7	10946.9	10884.6
5°	11307.5	11178.4	10955.8	10711.0	10452.8	10201.2	10009.8	9889.6	9798.4	9751.6	9669.3
7.5°	10893.5	10704.3	10314.8	9891.8	9457.8	9061.6	8718.8	8502.9	8298.1	8202.4	8093.3
10°	10499.5	10216.8	9611.4	8988.1	8364.9	7766.1	7203.0	6804.5	6450.6	6252.5	6112.3
12.5°	10161.2	9773.9	8934.7	8091.1	7236.4	6383.8	5540.2	4876.9	4322.7	4031.1	3881.9
15°	9831.7	9364.3	8291.4	7220.8	6123.4	4963.7	3855.2	3102.9	2644.4	2461.8	2399.5
17.5°	9533.5	8934.7	7645.9	6343.8	4974.9	3572.5	2590.9	2176.9	2001.1	1941.0	1920.9
20°	9210.7	8500.7	6975.9	5426.7	3777.3	2497.4	2023.3	1840.8	1769.6	1751.8	1742.9
22.5°	8899.1	8073.3	6334.9	4445.1	2713.4	1927.6	1738.4	1662.7	1651.6	1667.2	1667.2
25°	8634.2	7690.4	5642.6	3419.0	1992.2	1622.7	1555.9	1538.1	1580.4	1638.3	1649.4
27.5°	8436.1	7376.6	4905.9	2524.2	1587.1	1411.2	1409.0	1437.9	1542.5	1653.8	1676.1
30°	8300.3	7078.3	4117.9	1820.8	1331.1	1242.0	1277.7	1340.0	1493.6	1651.6	1693.9
32.5°	8231.3	6858.0	3296.5	1409.0	1139.7	1090.7	1150.8	1226.5	1377.8	1524.7	1580.4
35°	8284.8	6695.5	2521.9	1175.3	1006.1	968.3	1030.6	1104.0	1193.1	1255.4	1297.7
37.5°	8485.1	6630.9	1903.1	1052.8	914.8	879.2	928.2	970.5	1006.1	1023.9	1043.9
40°	8916.9	6699.9	1524.7	990.5	863.6	819.1	839.2	854.7	877.0	894.8	903.7
42.5°	9553.5	6906.9	1366.7	966.0	836.9	772.4	767.9	774.6	803.5	836.9	843.6
45°	10443.9	7272.0	1355.6	981.6	823.6	734.5	714.5	723.4	767.9	819.1	828.0
47.5°	11581.3	7828.4	1444.6	1028.4	834.7	714.5	681.1	692.3	747.9	816.9	828.0
50°	12959.1	8605.3	1593.7	1097.4	883.7	719.0	670.0	676.7	734.5	810.2	821.4
52.5°	14586.2	9707.1	1756.2	1164.1	934.9	747.9	678.9	663.3	716.7	783.5	796.9
55°	16395.9	11120.5	1923.2	1224.2	961.6	783.5	696.7	645.5	683.3	739.0	750.1
57.5°	18617.3	13097.1	2212.5	1282.1	979.4	808.0	714.5	627.7	641.1	681.1	690.0
60°	21624.5	15892.8	2722.3	1377.8	1019.5	816.9	712.3	612.1	598.8	621.0	625.5
62.5°	25228.2	18928.9	3147.4	1498.0	1086.2	823.6	698.9	601.0	563.1	563.1	567.6
65°	27367.3	19741.4	2911.5	1598.2	1141.9	816.9	683.3	589.9	536.4	512.0	514.2
67.5°	25553.2	17361.9	2495.2	1618.2	1139.7	785.7	658.9	569.8	509.7	471.9	469.7
69°	23280.6	14980.2	2308.2	1564.8	1086.2	745.7	627.7	547.6	489.7	449.6	447.4
70°	21448.7	13526.7	2185.8	1506.9	1028.4	716.7	603.2	527.5	474.1	436.3	431.8
72.5°	15594.6	8863.5	1867.5	1295.5	848.1	601.0	520.9	463.0	422.9	400.7	396.2
75°	7792.8	4227.0	1515.8	1050.6	650.0	480.8	427.4	387.3	367.3	362.8	360.6
77.5°	2559.8	1936.5	1084.0	783.5	483.0	376.2	345.0	316.1	311.6	325.0	320.5
80°	1406.8	1126.3	687.8	518.6	329.4	276.0	271.6	256.0	262.7	284.9	280.5
82.5°	716.7	585.4	425.1	311.6	222.6	198.1	215.9	207.0	215.9	235.9	233.7
85°	353.9	320.5	269.3	189.2	146.9	126.9	153.6	160.3	164.7	180.3	180.3
87.5°	204.8	189.2	142.5	89.0	73.5	66.8	89.0	86.8	102.4	111.3	109.1
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)