

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: P301248

Luminaire Tested: **GLNA-AF-09-LED-E1-T3R-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301248
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)
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-T3R-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31032.1 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

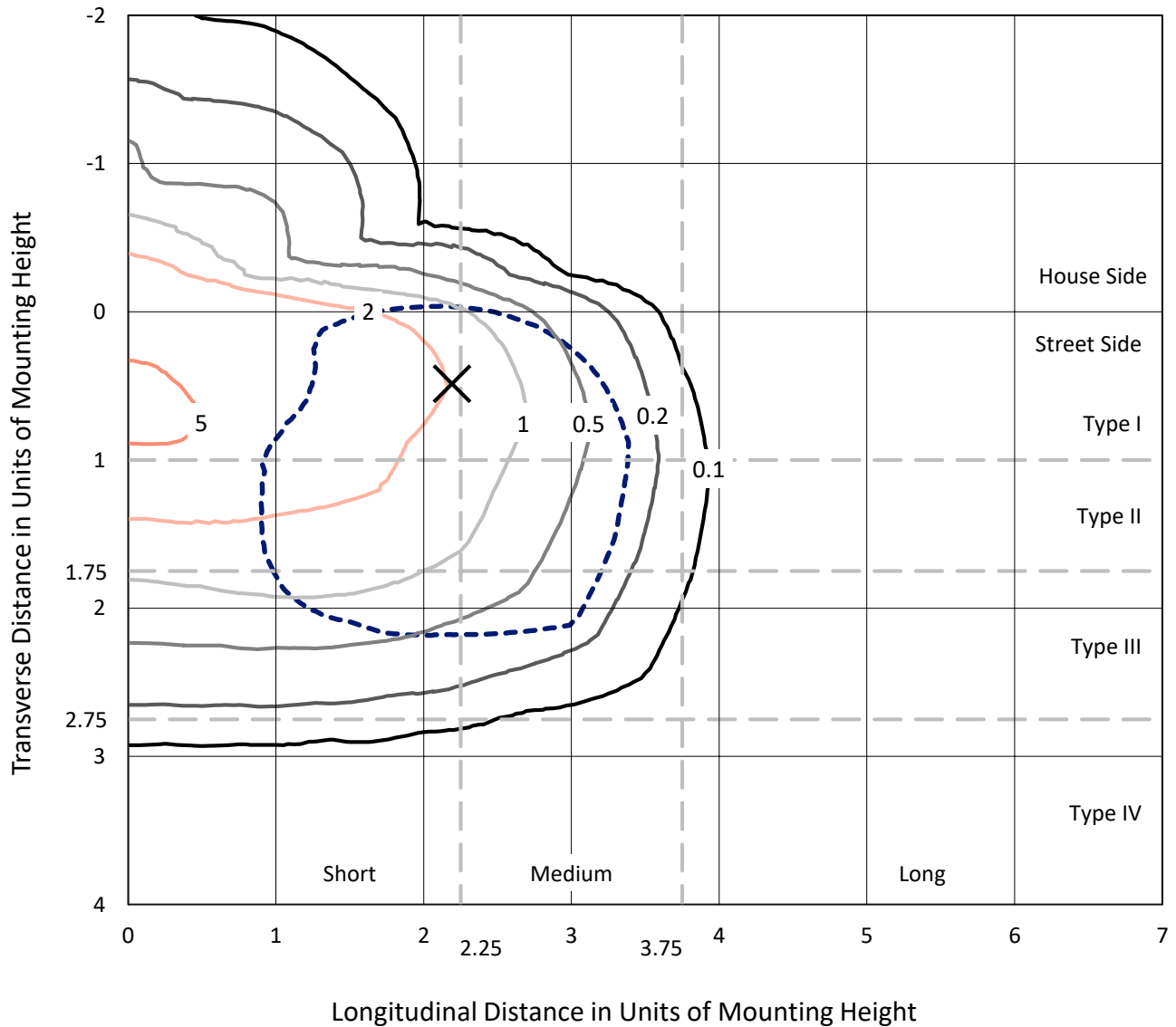
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P301248
 CATALOG NUMBER: GLNA-AF-09-LED-E1-T3R-7027-600

Iso-Footcandle Lines of Horizontal Illumination

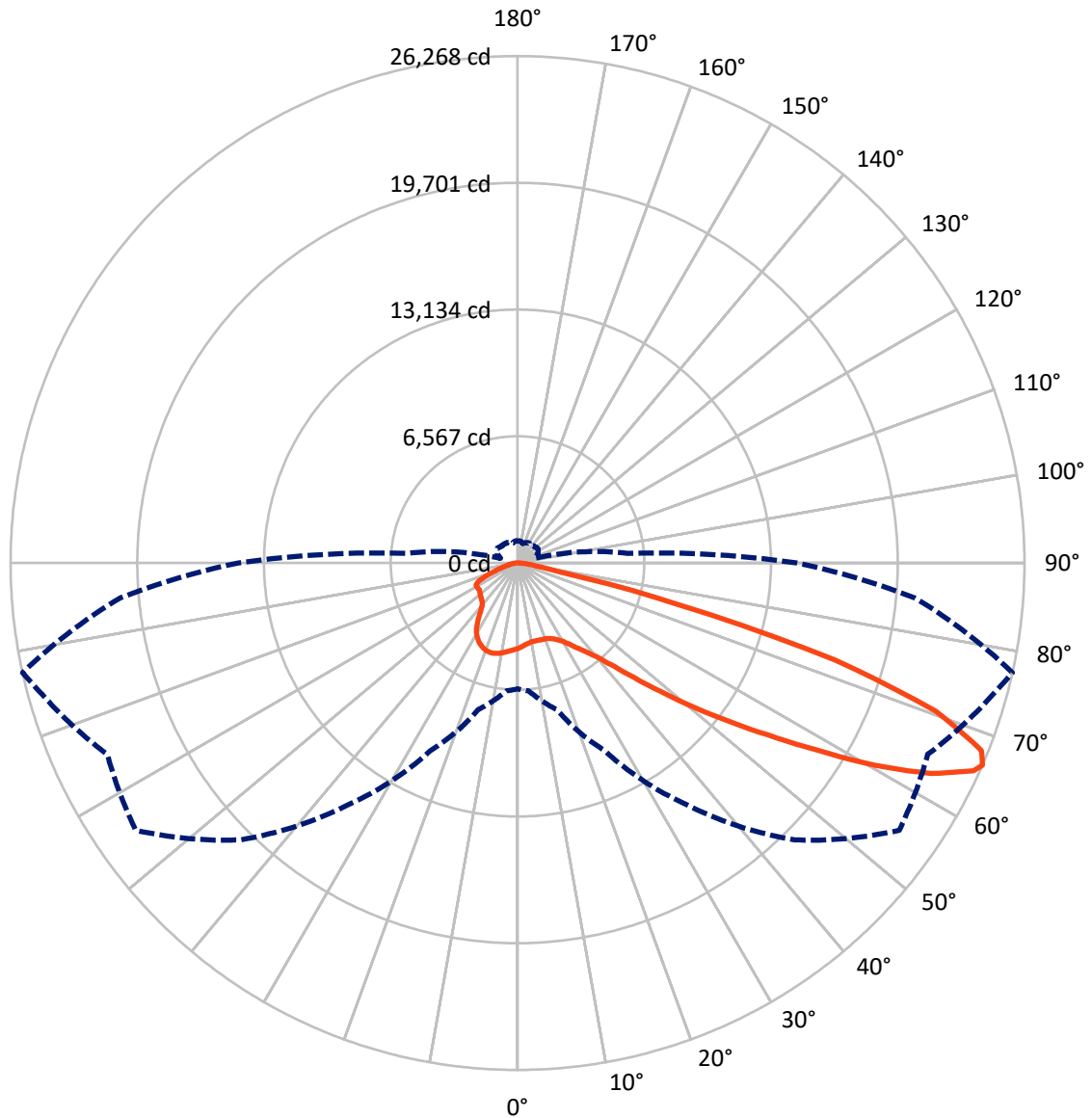
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.1 fc
 Type III - Short - Full Cutoff

REPORT NUMBER: P301248
CATALOG NUMBER: GLNA-AF-09-LED-E1-T3R-7027-600

Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

REPORT NUMBER: P301248

CATALOG NUMBER: GLNA-AF-09-LED-E1-T3R-7027-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5301.6	0.0	5301.6
	% Fixture	17.1	0.0	17.1
Street Side	Lumens	25730.4	0.0	25730.4
	% Fixture	82.9	0.0	82.9
Total	Lumens	31032.1	0.0	31032.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	395.1	1.3
10°-20°	1114.6	3.6
20°-30°	1902.2	6.1
30°-40°	3045.2	9.8
40°-50°	4704.5	15.2
50°-60°	6672.6	21.5
60°-70°	8926.1	28.8
70°-80°	3876.5	12.5
80°-90°	395.3	1.3
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°	31032.1	100.0
0°-180°	31032.1	100.0



REPORT NUMBER: P301248

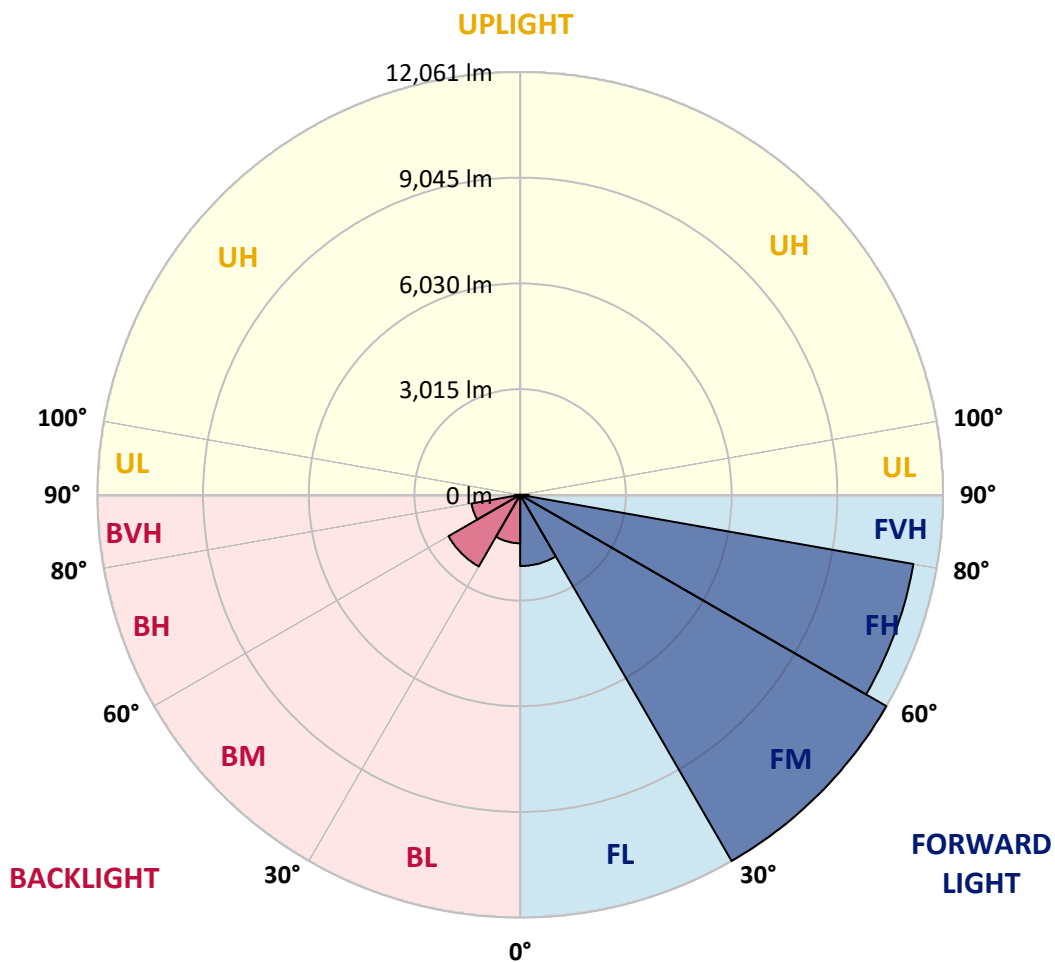
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2031.2	6.5			
FM	(30°-60°)	12060.7	38.9			
FH	(60°-80°)	11390.6	36.7			G4/12000
FVH	(80°-90°)	247.9	0.8			G3/500
BL	(0°-30°)	1380.8	4.4	B3/2500		
BM	(30°-60°)	2361.6	7.6	B2/2500		
BH	(60°-80°)	1411.9	4.5	B3/2500		G3/2500
BVH	(80°-90°)	147.4	0.5			G2/225
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 Short





REPORT NUMBER: P301248

CATALOG NUMBER: GLNA-AF-09-LED-E1-T3R-7027-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2
2.5°	3912.1	3938.3	3960.5	3980.9	4021.7	4089.2	4166.9	4229.9	4321.0	4338.7	4387.1
5°	3552.9	3552.9	3570.2	3601.3	3656.8	3758.0	3863.7	4004.4	4202.4	4249.0	4378.2
7.5°	3378.4	3379.8	3390.0	3416.2	3464.6	3556.9	3672.8	3838.8	4107.0	4184.7	4404.4
10°	3442.8	3428.2	3406.0	3393.1	3400.2	3454.4	3564.5	3749.1	4048.4	4147.8	4463.5
12.5°	3803.3	3775.8	3699.4	3598.2	3501.4	3461.9	3526.3	3706.5	4023.5	4139.4	4541.1
15°	4392.9	4381.3	4238.8	4029.3	3794.9	3598.2	3554.3	3690.5	4026.2	4149.6	4633.5
17.5°	5132.0	5115.6	4928.3	4623.3	4240.6	3857.9	3652.4	3703.9	4036.4	4166.9	4722.7
20°	5878.3	5828.2	5626.2	5262.6	4771.1	4210.9	3815.3	3737.6	4049.7	4186.0	4816.8
22.5°	6435.5	6394.2	6212.6	5859.2	5293.2	4620.2	4033.7	3796.2	4092.3	4241.9	4932.3
25°	6925.2	6927.8	6747.6	6406.2	5821.1	5054.4	4315.2	3952.9	4200.6	4356.0	5090.8
27.5°	7530.7	7495.6	7326.9	6988.2	6343.1	5492.5	4655.2	4168.7	4362.2	4519.0	5299.0
30°	8254.8	8229.9	8035.0	7651.0	6922.0	5963.1	5043.7	4419.1	4570.4	4732.9	5571.6
32.5°	9106.7	9095.2	8892.7	8398.6	7590.6	6517.6	5500.1	4750.7	4881.2	5049.9	5963.1
35°	10106.9	10108.3	9869.4	9275.4	8322.3	7162.7	6017.3	5177.3	5259.5	5435.3	6429.7
37.5°	10722.7	10797.3	10708.0	10102.5	9150.7	7884.1	6689.0	5743.4	5690.5	5868.1	6929.6
40°	10854.5	10945.5	11228.3	10920.7	10077.6	8678.7	7284.3	6287.2	6221.5	6438.1	7573.3
42.5°	10669.9	10795.9	11394.4	11611.0	11061.4	9658.1	8084.7	7095.2	7011.7	7303.4	8373.8
45°	10559.8	10653.9	11346.0	11970.6	11914.7	10765.3	9104.1	8109.6	8079.0	8461.7	9297.6
47.5°	10369.3	10454.5	11120.0	12054.1	12416.3	11779.7	10328.5	9350.4	9410.4	9912.0	10340.0
50°	10471.9	10506.9	10867.9	11841.4	12561.5	12523.3	11696.3	10787.1	10992.6	11618.6	11520.5
52.5°	10457.2	10548.2	10838.6	11492.5	12580.6	12982.4	13043.6	12389.7	12822.6	13540.9	12829.7
55°	8454.6	8621.5	10494.1	11404.6	12647.6	13432.1	14243.2	14078.9	14885.1	15722.4	14307.6
57.5°	8073.2	8178.9	9216.8	11589.3	13005.5	14291.6	15577.3	15938.2	17286.9	18259.2	16108.2
60°	7998.2	8128.7	9203.5	11815.2	13731.3	15691.8	17555.5	18189.0	20209.4	21274.0	18196.1
62.5°	7765.1	7905.8	9116.9	11785.5	14762.2	17628.7	20087.8	20581.9	22980.5	24015.8	19942.6
65°	7026.4	7158.2	8411.9	11312.3	15457.4	19696.2	23084.4	22775.4	25168.3	25946.6	20813.2
66°	6520.3	6649.5	7856.1	10755.1	15295.8	20282.7	24146.4	23454.2	25658.0	26268.0	20643.2
67.5°	5595.1	5696.3	6776.9	9507.2	14438.1	20446.9	25039.1	23964.3	25709.1	25924.8	19671.4
70°	3535.2	3564.5	4404.4	6562.9	10929.6	17732.6	23679.8	22697.8	23589.2	23005.4	16490.9
72.5°	1533.8	1523.6	2114.5	3338.5	6187.8	11898.7	19155.0	18728.4	18504.2	17172.8	11544.0
75°	853.3	865.3	1098.3	1549.8	2514.5	5844.6	12530.4	11991.0	10124.2	8639.2	5234.6
77.5°	684.6	701.0	910.5	1099.7	1129.0	2038.2	5863.7	4771.1	2872.3	2305.0	1454.4
80°	541.2	570.5	794.7	856.4	760.9	840.0	1894.3	1514.8	1136.5	1042.4	753.8
82.5°	428.0	448.8	681.9	648.2	532.3	566.0	907.4	884.3	739.2	673.0	435.5
85°	308.1	345.8	560.3	488.3	348.9	381.4	602.4	577.6	423.5	345.8	192.2
87.5°	126.1	164.3	396.0	324.1	194.9	177.6	300.6	282.8	200.7	146.5	95.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P301248

CATALOG NUMBER: GLNA-AF-09-LED-E1-T3R-7027-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2	4422.2
2.5°	4417.7	4452.8	4498.5	4526.5	4541.1	4551.4	4567.3	4566.0	4570.4	4571.8	4577.6
5°	4447.0	4505.6	4571.8	4589.5	4589.5	4573.1	4557.1	4530.5	4520.3	4517.6	4520.3
7.5°	4523.4	4587.8	4645.0	4624.6	4580.7	4515.8	4432.4	4359.1	4319.6	4306.3	4303.6
10°	4620.2	4697.9	4721.4	4643.7	4514.5	4359.1	4193.5	4073.2	4004.4	3985.3	3979.6
12.5°	4737.4	4810.6	4778.7	4614.4	4375.1	4124.7	3895.6	3703.9	3560.0	3514.7	3511.6
15°	4866.6	4923.8	4810.6	4523.4	4166.9	3797.5	3390.0	3058.8	2879.9	2822.6	2818.2
17.5°	4986.9	5016.2	4791.5	4364.9	3860.6	3262.6	2721.4	2466.1	2404.9	2419.5	2422.2
20°	5089.4	5089.4	4727.2	4137.6	3378.4	2557.1	2215.3	2211.3	2255.3	2299.2	2308.1
22.5°	5202.2	5134.7	4614.4	3816.6	2694.8	2092.3	2042.6	2083.5	2133.2	2181.6	2189.1
25°	5341.6	5171.6	4457.2	3330.1	2118.5	1900.1	1919.2	1952.9	1977.8	2008.9	2013.3
27.5°	5497.0	5218.2	4250.8	2659.7	1838.8	1780.2	1794.9	1806.4	1803.3	1815.3	1818.0
30°	5683.0	5272.8	3967.6	2079.0	1723.0	1677.2	1651.0	1640.8	1640.8	1659.9	1667.0
32.5°	5932.5	5353.1	3561.4	1781.6	1667.0	1604.0	1519.2	1481.0	1495.7	1560.0	1574.7
35°	6206.8	5439.7	3011.7	1680.3	1655.5	1570.2	1438.4	1367.8	1369.6	1429.5	1448.6
37.5°	6505.6	5549.8	2408.9	1661.3	1681.7	1572.0	1395.8	1299.0	1259.5	1259.5	1267.0
40°	6888.3	5662.6	1950.3	1674.6	1737.6	1589.3	1374.0	1244.8	1133.4	1136.5	1142.3
42.5°	7386.9	5759.3	1703.9	1702.1	1805.1	1612.9	1372.2	1172.9	1076.1	1142.3	1202.2
45°	7941.3	5807.7	1595.1	1727.4	1859.3	1627.5	1349.2	1161.4	1083.7	1279.9	1394.4
47.5°	8578.9	5779.8	1535.2	1735.8	1872.6	1627.5	1322.5	1189.3	1134.7	1482.3	1616.0
50°	9278.5	5699.4	1476.6	1718.5	1868.1	1624.4	1347.4	1216.9	1153.8	1517.4	1609.8
52.5°	10101.2	5631.9	1414.9	1680.3	1837.1	1608.4	1376.7	1205.3	1093.9	1379.8	1444.2
55°	11039.2	5651.0	1346.1	1626.2	1788.7	1577.8	1366.5	1158.3	1030.8	1215.5	1255.0
57.5°	12238.8	5878.3	1263.9	1557.4	1723.0	1526.3	1330.1	1136.5	1011.8	1102.8	1126.3
60°	13577.3	6273.9	1161.4	1488.1	1640.8	1444.2	1302.1	1146.7	1020.6	1093.9	1105.4
62.5°	14559.7	6504.3	1073.5	1386.9	1529.4	1353.2	1267.0	1159.6	1044.2	1124.5	1121.9
65°	14826.5	6126.0	963.4	1239.1	1378.5	1258.1	1222.6	1174.2	1054.4	1149.4	1136.5
66°	14452.7	5718.5	915.0	1170.2	1302.1	1211.1	1200.9	1172.9	1049.9	1152.5	1130.3
67.5°	13545.3	4882.5	831.5	1069.0	1180.5	1140.9	1165.8	1159.6	1038.0	1149.4	1118.8
70°	11046.8	3331.4	711.2	890.1	982.5	1004.2	1098.3	1113.0	999.8	1098.3	1030.8
72.5°	7718.5	2029.3	629.1	690.8	794.7	856.4	1006.0	1048.2	948.7	958.9	894.6
75°	3730.1	1077.9	570.5	535.4	617.1	715.6	894.6	960.3	867.9	802.2	778.7
77.5°	1162.7	658.4	483.9	431.1	483.9	577.6	747.6	841.7	772.9	671.7	662.8
80°	624.6	483.9	372.5	345.8	382.7	453.3	587.8	702.3	664.1	602.4	538.1
82.5°	412.0	313.9	275.7	268.1	291.7	345.8	436.8	582.0	582.0	516.3	375.6
85°	212.7	192.2	189.1	189.1	203.8	230.4	297.4	448.8	478.1	272.6	226.0
87.5°	105.7	110.1	102.6	107.0	114.5	112.8	142.1	226.0	269.9	165.6	137.6
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)