

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: P299266

Luminaire Tested: **GLNA-AF-09-LED-E1-T3-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299266  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24140)  
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-T3-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 34942.4 lumens  
Efficiency: N/A  
Efficacy: 120.5 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 - G5

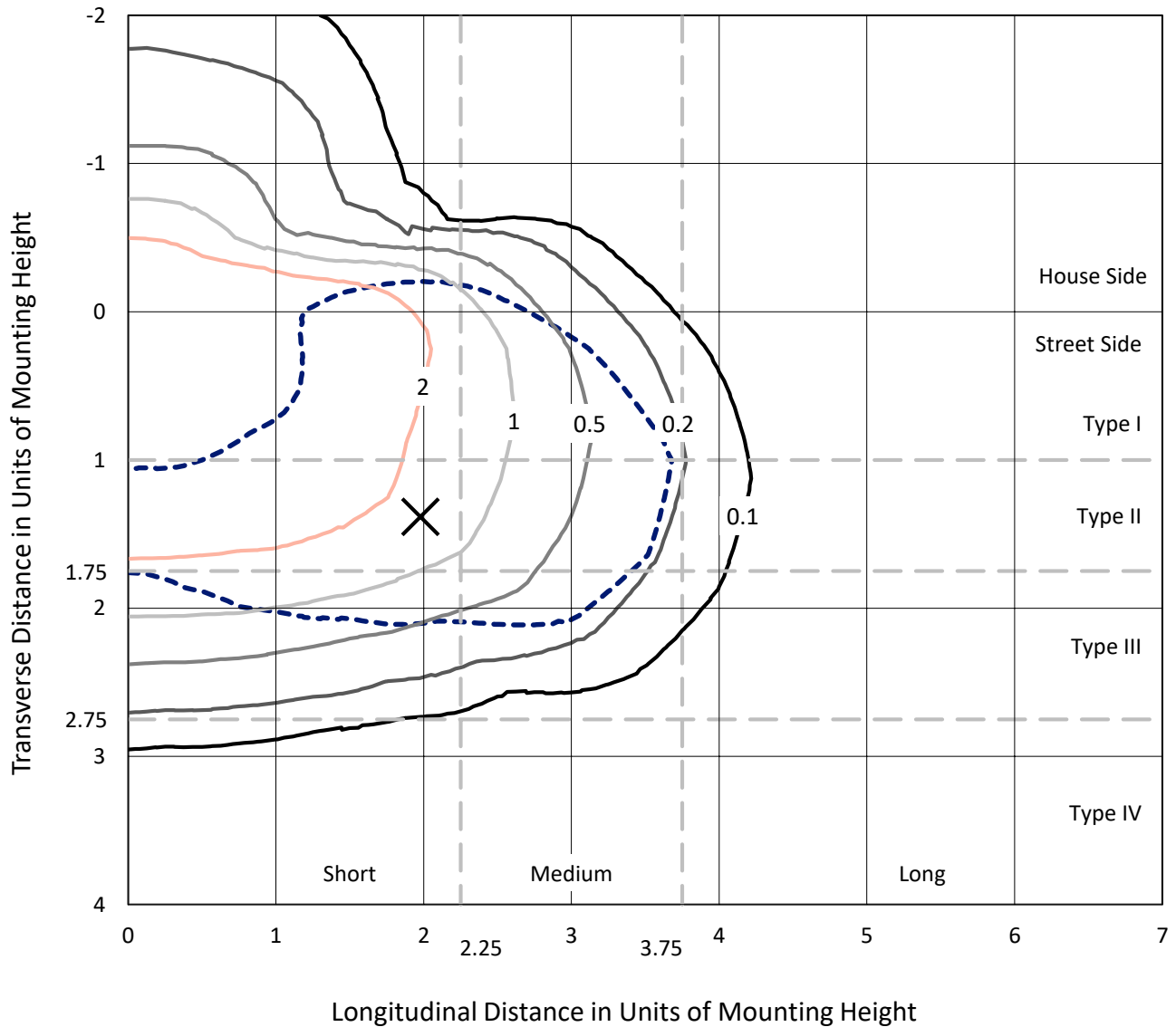
Input Watts (W): 290  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

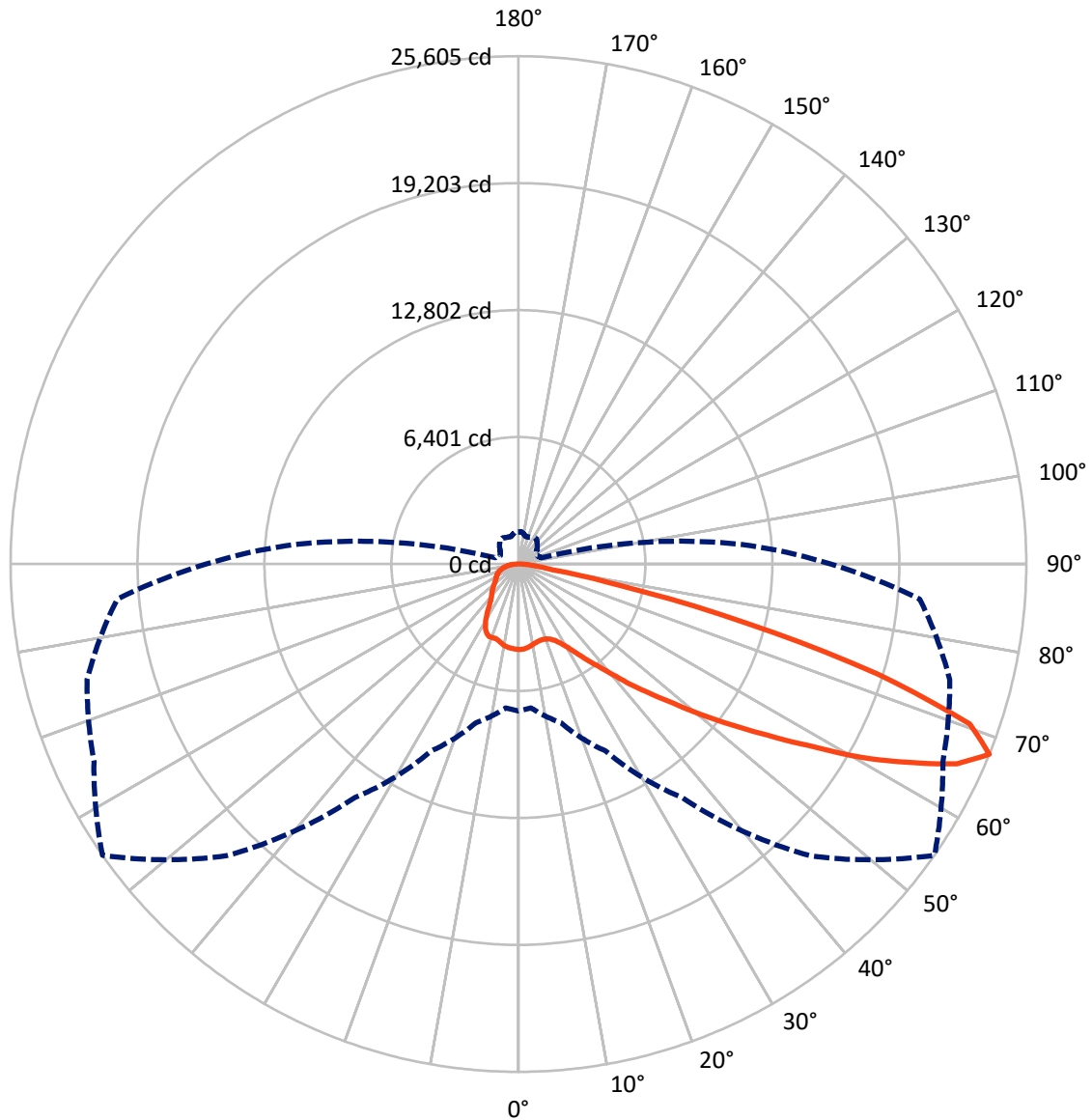
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.9 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7548.3	0.0	7548.3
	% Fixture	21.6	0.0	21.6
<b>Street Side</b>	Lumens	27394.1	0.0	27394.1
	% Fixture	78.4	0.0	78.4
<b>Total</b>	Lumens	34942.4	0.0	34942.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	402.2	1.2
10°-20°	1139.0	3.3
20°-30°	1908.0	5.5
30°-40°	3137.6	9.0
40°-50°	5281.6	15.1
50°-60°	8312.8	23.8
60°-70°	9920.4	28.4
70°-80°	4260.0	12.2
80°-90°	580.8	1.7
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°	34942.4	100.0
0°-180°	34942.4	100.0



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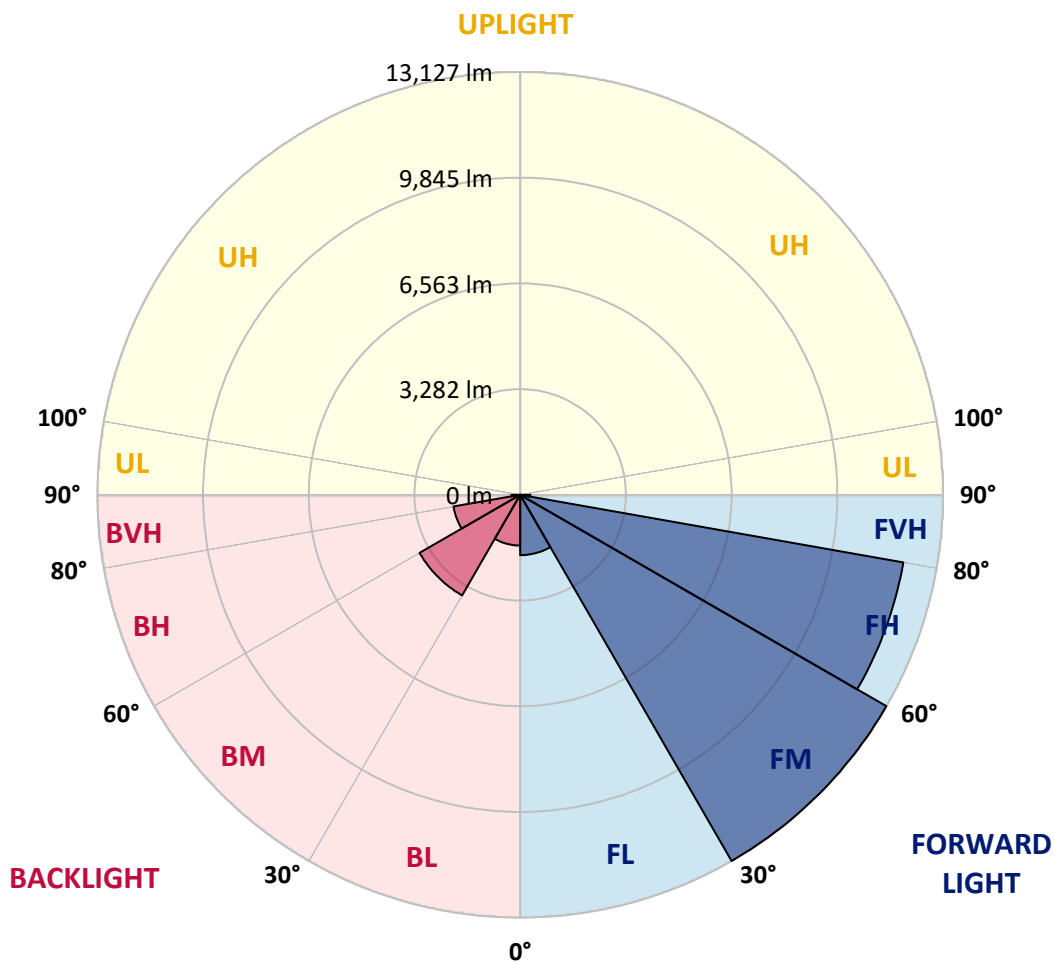
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1873.0	5.4			
FM (30°-60°)	13127.0	37.6			
FH (60°-80°)	12079.8	34.6			G5
FVH (80°-90°)	314.4	0.9			G3/500
BL (0°-30°)	1576.2	4.5	B3/2500		
BM (30°-60°)	3605.0	10.3	B3/5000		
BH (60°-80°)	2100.7	6.0	B3/2500		G3/2500
BVH (80°-90°)	266.4	0.8			G3/500
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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8
2.5°	4271.7	4273.3	4276.7	4290.2	4302.0	4298.7	4300.3	4293.6	4291.9	4281.8	4291.9
5°	4217.6	4222.7	4224.4	4246.3	4259.8	4263.2	4258.2	4249.7	4239.6	4229.5	4234.5
7.5°	4094.4	4107.9	4109.6	4140.0	4161.9	4190.6	4192.3	4194.0	4189.0	4182.2	4192.3
10°	4016.8	4020.2	4018.5	4040.4	4057.3	4089.4	4107.9	4140.0	4153.5	4156.9	4163.6
12.5°	4011.7	4008.4	4003.3	4003.3	3998.2	4011.7	4045.5	4091.1	4123.1	4133.3	4141.7
15°	4065.7	4064.1	4047.2	4021.9	3989.8	3979.7	4008.4	4059.0	4101.2	4123.1	4131.6
17.5°	4187.3	4177.1	4150.1	4092.8	4023.6	3996.6	3999.9	4042.1	4091.1	4119.8	4128.2
20°	4410.0	4410.0	4352.7	4244.6	4121.4	4057.3	4026.9	4052.2	4099.5	4138.3	4150.1
22.5°	4794.8	4798.2	4702.0	4524.8	4317.2	4180.5	4104.6	4099.5	4155.2	4199.1	4212.6
25°	5340.0	5326.5	5191.5	4938.3	4622.7	4396.5	4264.9	4234.5	4281.8	4330.7	4347.6
27.5°	5974.6	5925.6	5765.3	5459.8	5051.4	4720.6	4518.1	4469.1	4514.7	4570.4	4587.3
30°	6602.4	6551.8	6361.1	6026.9	5572.9	5154.3	4864.0	4784.7	4848.9	4928.2	4938.3
32.5°	7230.2	7230.2	7017.6	6627.7	6133.2	5672.5	5324.8	5230.3	5336.6	5432.8	5454.8
35°	7981.3	7984.7	7778.8	7309.6	6777.9	6290.2	5907.1	5837.9	5998.2	6065.7	6118.0
37.5°	8904.5	8923.0	8658.1	8091.0	7508.7	6995.7	6540.0	6445.5	6605.8	6789.8	6958.5
40°	9901.9	9925.6	9633.6	8934.9	8352.6	7815.9	7323.1	7152.6	7419.3	7770.3	7988.0
42.5°	10853.8	10975.3	10693.5	9974.5	9348.4	8793.1	8293.5	8045.4	8379.6	8909.5	9098.6
45°	12229.3	12317.1	11825.9	11174.5	10585.5	9964.4	9302.8	9041.2	9508.7	10177.0	10215.8
47.5°	13145.8	13079.9	12830.1	12425.1	12052.1	11471.5	10475.8	10188.8	10809.9	11596.4	11378.7
50°	13633.5	13653.8	13620.0	13643.6	13657.1	13292.6	11913.7	11520.5	12261.4	13211.6	12710.3
52.5°	14089.2	13954.2	14065.6	14619.1	15287.5	15152.5	13478.2	13068.1	13817.5	15003.9	14117.9
55°	14079.1	13873.2	14236.0	15213.2	16663.0	16818.3	15235.2	14762.6	15463.0	16926.3	15609.8
57.5°	13581.2	13591.3	14150.0	15429.3	17621.6	18384.5	17273.9	16565.1	17208.1	18873.9	16971.8
60°	12896.0	12988.8	13793.8	15393.8	18389.5	19668.8	19775.2	18507.7	18917.8	20644.4	18099.2
62.5°	11790.5	11888.4	12998.9	15025.9	18273.1	20905.9	22036.7	20711.9	20705.1	21717.7	18430.0
65°	10047.1	10018.4	11184.6	13650.4	17295.9	21820.7	24283.1	22617.3	22051.9	21734.6	17765.1
67.5°	7409.1	7280.9	8281.7	10396.4	14376.1	20796.2	25604.6	23609.7	22511.0	20305.1	15733.0
70°	3844.7	3716.4	4526.5	6070.8	9454.7	16230.9	24141.3	23096.6	21496.7	17020.8	12325.5
72.5°	1643.9	1621.9	1951.0	2663.2	4573.8	9361.9	18929.6	19991.2	18445.2	12681.6	8474.1
75°	1105.5	1098.7	1221.9	1451.5	2057.3	3799.1	11846.2	14190.5	13495.1	7863.1	4766.2
77.5°	867.5	859.1	931.6	1043.0	1333.3	1498.7	5257.3	7618.4	7051.3	3422.7	2086.0
80°	678.5	671.7	717.3	778.0	958.6	945.1	1729.9	3031.2	2345.9	1311.4	1014.3
82.5°	535.0	535.0	572.1	573.8	680.2	644.7	902.9	1335.0	1171.3	764.5	621.1
85°	489.4	489.4	528.3	428.7	443.9	406.7	560.3	791.5	742.6	313.9	270.0
87.5°	246.4	239.7	443.9	379.7	241.3	216.0	273.4	383.1	411.8	173.8	135.0
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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8	4308.8
2.5°	4288.5	4286.8	4290.2	4291.9	4305.4	4324.0	4332.4	4344.2	4351.0	4347.6
5°	4237.9	4241.3	4254.8	4264.9	4288.5	4318.9	4335.8	4349.3	4361.1	4356.0
7.5°	4195.7	4204.1	4224.4	4232.8	4246.3	4254.8	4253.1	4258.2	4268.3	4256.5
10°	4172.1	4182.2	4197.4	4185.6	4153.5	4107.9	4065.7	4043.8	4050.6	4042.1
12.5°	4148.4	4161.9	4150.1	4094.4	4005.0	3945.9	3913.9	3917.2	3932.4	3935.8
15°	4134.9	4140.0	4089.4	3984.7	3893.6	3885.2	3902.0	3898.7	3900.4	3900.4
17.5°	4134.9	4121.4	4026.9	3922.3	3883.5	3868.3	3816.0	3750.1	3721.5	3711.3
20°	4156.9	4121.4	4006.7	3937.5	3853.1	3723.1	3584.7	3463.2	3409.2	3394.0
22.5°	4222.7	4161.9	4064.1	3944.2	3704.6	3486.9	3267.5	3122.3	3024.4	3007.5
25°	4356.0	4288.5	4177.1	3854.8	3468.3	3157.7	2908.0	2745.9	2648.1	2634.6
27.5°	4588.9	4545.1	4237.9	3657.3	3154.4	2821.9	2590.7	2465.8	2393.2	2388.1
30°	4940.0	4918.1	4207.5	3365.3	2767.9	2496.2	2384.8	2312.2	2258.2	2256.5
32.5°	5500.3	5323.1	4107.9	3009.2	2415.1	2264.9	2219.4	2175.5	2133.3	2133.3
35°	6221.0	5650.5	3918.9	2627.8	2200.8	2136.7	2079.3	2010.1	1954.4	1951.0
37.5°	7068.2	5853.1	3579.7	2320.6	2099.5	2050.6	1966.2	1863.3	1765.4	1748.5
40°	7923.9	5913.8	3102.1	2131.6	2035.4	1964.5	1861.6	1740.1	1645.5	1640.5
42.5°	8708.7	5797.4	2595.7	2001.7	1971.3	1876.8	1768.7	1660.7	1586.5	1584.8
45°	9366.9	5495.3	2170.4	1878.4	1903.8	1797.4	1701.2	1613.5	1556.1	1544.3
47.5°	9986.3	5068.3	1871.7	1748.5	1836.3	1753.6	1672.5	1589.8	1534.1	1525.7
50°	10705.3	4607.5	1662.4	1621.9	1777.2	1738.4	1696.2	1610.1	1517.3	1507.1
52.5°	11576.2	4209.2	1498.7	1510.5	1731.6	1758.6	1756.9	1667.5	1505.5	1492.0
55°	12548.3	3767.0	1375.5	1419.4	1713.0	1795.7	1772.1	1721.5	1515.6	1495.3
57.5°	13505.2	3250.6	1289.4	1350.2	1686.0	1792.4	1699.5	1627.0	1539.2	1510.5
60°	14222.5	2556.9	1223.6	1289.4	1627.0	1736.7	1620.2	1524.0	1534.1	1512.2
62.5°	14269.8	1976.3	1144.3	1237.1	1537.5	1681.0	1567.9	1478.5	1556.1	1535.8
65°	13431.0	1493.6	1068.3	1174.7	1441.3	1645.5	1517.3	1453.1	1601.7	1579.7
67.5°	11307.8	1201.7	1004.2	1110.5	1345.1	1571.3	1471.7	1429.5	1642.2	1603.3
70°	8163.6	1024.5	941.8	1032.9	1259.0	1486.9	1431.2	1387.3	1532.5	1471.7
72.5°	5026.1	887.7	870.9	929.9	1193.2	1399.1	1370.4	1308.0	1380.6	1331.6
75°	2509.7	769.6	791.5	828.7	1100.4	1299.6	1269.2	1206.7	1216.9	1206.7
77.5°	1201.7	658.2	698.7	727.4	980.6	1186.5	1154.4	1090.3	1078.5	1080.1
80°	761.2	550.2	589.0	609.3	875.9	1054.8	1022.8	958.6	1093.7	1014.3
82.5°	475.9	447.2	457.4	494.5	762.9	918.1	875.9	818.6	985.6	779.7
85°	263.3	312.2	325.7	357.8	587.3	767.9	725.7	653.2	585.6	575.5
87.5°	157.0	185.7	190.7	214.3	394.9	555.3	491.1	465.8	386.5	384.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)