

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: P299713

Luminaire Tested: **GLNA-AF-04-LED-E1-5MQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299713
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24142)
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-E1-5MQ-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14388 lumens
Efficiency: N/A
Efficacy: 111.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - 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

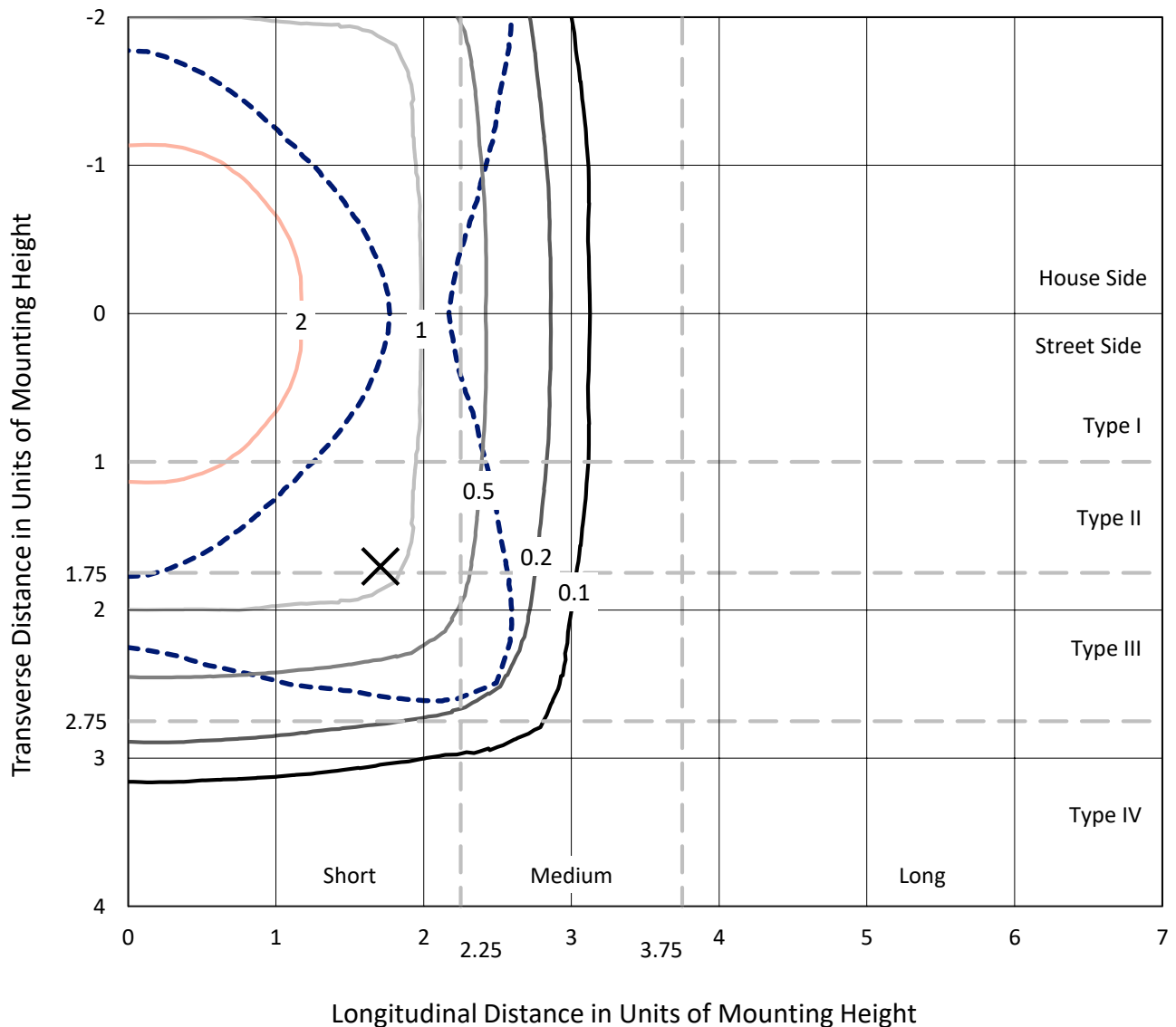


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

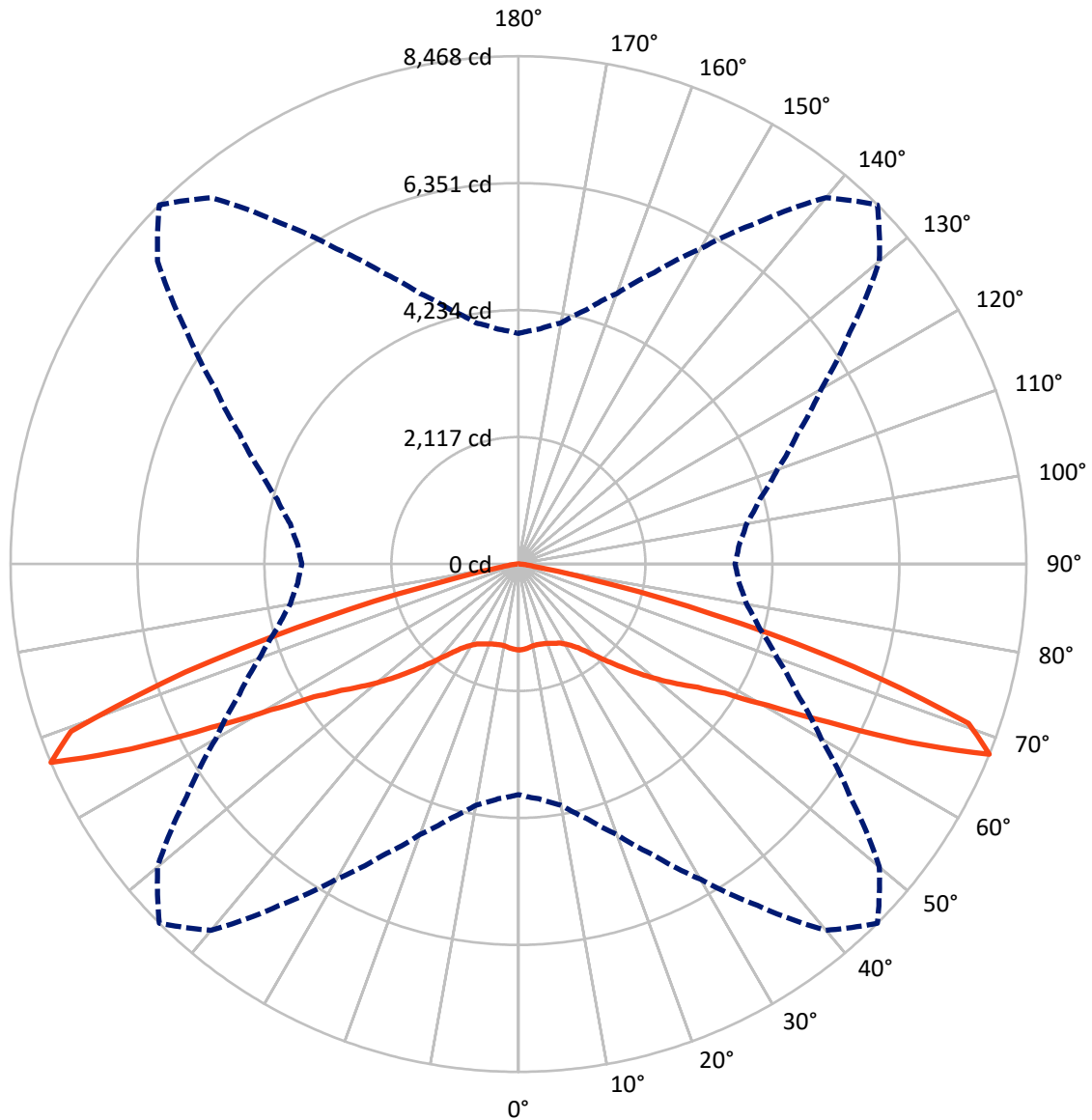


Based on 20 foot mounting height. Maximum calculated value = 3.6 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7194.0	0.0	7194.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7194.0	0.0	7194.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	14388.0	0.0	14388.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.2	0.9
10°-20°	389.4	2.7
20°-30°	662.0	4.6
30°-40°	1082.2	7.5
40°-50°	1931.9	13.4
50°-60°	3257.2	22.6
60°-70°	5054.7	35.1
70°-80°	1776.0	12.3
80°-90°	100.4	0.7
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°	14388.0	100.0
0°-180°	14388.0	100.0



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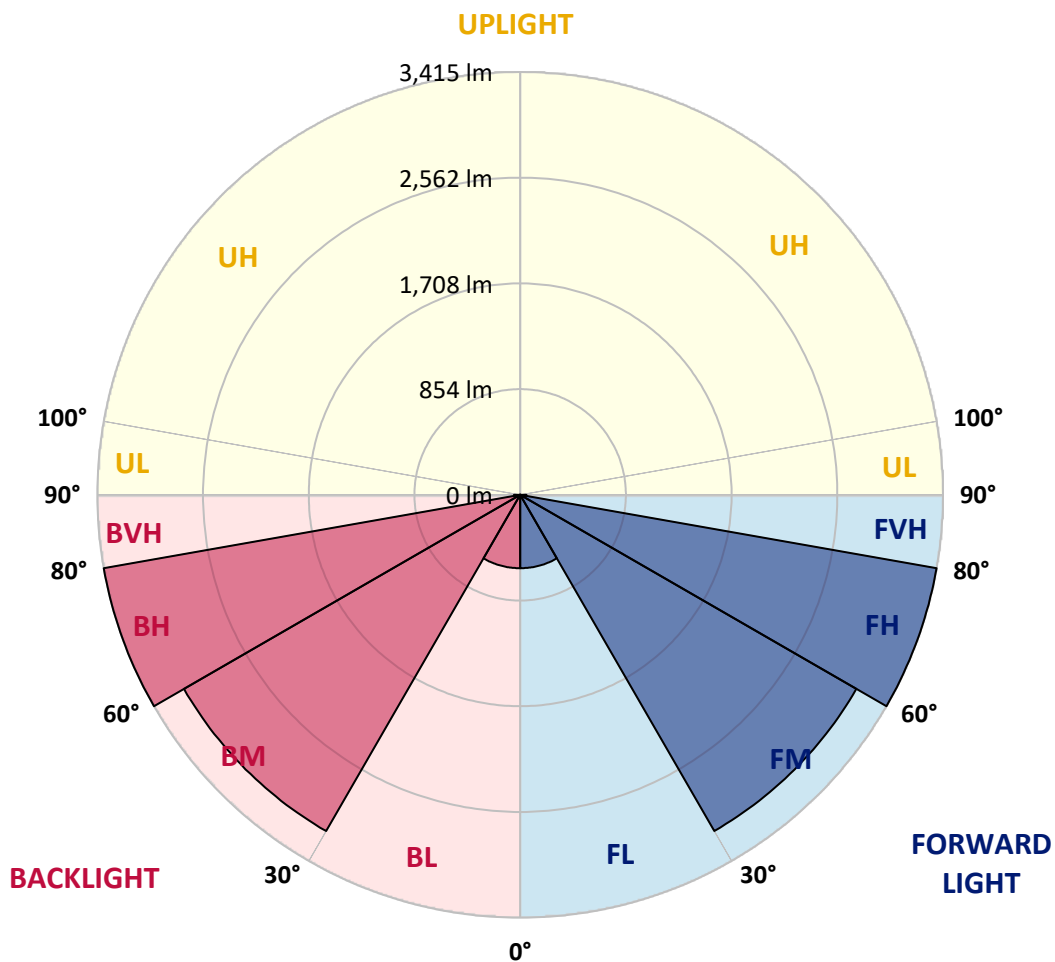
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	592.8	4.1			
FM	(30°-60°)	3135.6	21.8			
FH	(60°-80°)	3415.4	23.7			G2/5000
FVH	(80°-90°)	50.2	0.3			G1/100
BL	(0°-30°)	592.8	4.1	B2/1000		
BM	(30°-60°)	3135.6	21.8	B3/5000		
BH	(60°-80°)	3415.4	23.7	B4/5000		G2/5000
BVH	(80°-90°)	50.2	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1433.8	1433.8	1433.8	1433.8	1433.8	1433.8	1433.8	1433.8	1433.8	1433.8	1433.8
2.5°	1428.5	1429.9	1429.9	1429.9	1429.2	1429.2	1427.9	1429.2	1428.5	1426.5	1427.2
5°	1416.6	1417.9	1417.9	1417.3	1419.3	1418.6	1416.6	1417.9	1417.3	1416.0	1416.6
7.5°	1399.4	1401.4	1401.4	1400.7	1402.7	1402.1	1400.7	1401.4	1401.4	1399.4	1399.4
10°	1380.2	1381.6	1381.6	1380.9	1384.2	1384.2	1383.5	1385.5	1386.2	1384.2	1382.9
12.5°	1362.4	1364.3	1364.3	1367.0	1370.3	1371.6	1374.9	1377.6	1380.2	1379.6	1376.9
15°	1351.8	1353.1	1355.7	1359.1	1364.3	1369.0	1374.3	1380.2	1385.5	1386.8	1382.9
17.5°	1345.2	1347.1	1351.1	1355.7	1363.0	1371.0	1378.9	1386.8	1394.1	1396.8	1392.1
20°	1343.2	1344.5	1348.5	1356.4	1366.3	1378.2	1389.5	1398.8	1408.7	1412.0	1408.7
22.5°	1347.1	1349.8	1354.4	1363.7	1376.9	1392.1	1405.4	1417.9	1430.5	1436.5	1431.8
25°	1365.0	1367.7	1373.6	1385.5	1400.1	1416.0	1431.2	1445.7	1457.0	1462.9	1459.6
27.5°	1398.1	1401.4	1408.7	1420.6	1436.5	1453.7	1470.2	1482.1	1491.4	1493.4	1489.4
30°	1447.7	1455.0	1463.6	1476.8	1495.4	1509.9	1526.5	1537.0	1548.3	1548.3	1545.0
32.5°	1525.1	1532.4	1541.7	1554.2	1568.8	1584.7	1599.2	1608.5	1620.4	1621.1	1613.1
35°	1640.9	1644.2	1652.2	1660.1	1673.3	1687.2	1699.8	1705.8	1715.7	1716.4	1709.1
37.5°	1793.8	1794.4	1799.7	1802.4	1814.3	1829.5	1841.4	1845.4	1854.6	1853.3	1846.0
40°	1971.8	1975.1	1977.0	1981.0	1993.6	2008.1	2020.7	2022.7	2032.6	2030.6	2021.4
42.5°	2177.5	2178.9	2190.1	2196.1	2208.0	2215.2	2231.1	2233.1	2245.0	2239.7	2229.1
45°	2408.5	2420.4	2430.9	2442.9	2455.4	2464.0	2476.6	2474.0	2481.9	2474.0	2468.0
47.5°	2651.3	2659.9	2683.7	2702.2	2722.7	2730.0	2747.9	2739.9	2747.9	2736.6	2734.7
50°	2918.6	2933.8	2954.3	2975.5	2997.3	3009.2	3032.4	3022.5	3033.1	3022.5	3016.5
52.5°	3181.9	3185.9	3230.9	3262.0	3292.4	3306.3	3320.2	3315.6	3316.3	3315.6	3309.6
55°	3432.0	3441.3	3486.3	3528.6	3581.6	3620.6	3644.4	3641.8	3635.8	3629.9	3620.0
57.5°	3713.9	3723.2	3774.8	3827.1	3887.3	3942.8	3991.1	4040.8	4060.0	4065.3	4043.4
60°	4095.0	4094.4	4163.2	4226.7	4312.7	4395.4	4501.3	4609.1	4732.9	4790.4	4714.3
62.5°	4482.8	4498.6	4597.9	4710.4	4887.7	5060.4	5255.6	5447.5	5643.3	5802.8	5633.4
65°	4436.4	4497.3	4644.9	4899.6	5227.1	5616.2	6037.0	6482.3	6884.6	7161.2	6850.9
67.5°	3844.9	3931.6	4081.8	4391.5	4801.0	5362.1	6068.8	6949.4	7973.0	8468.0	7854.6
70°	2786.9	2884.8	3042.3	3344.7	3750.3	4283.6	5051.1	6108.5	7463.6	7962.4	7286.9
72.5°	1386.8	1439.8	1537.0	1729.6	2036.6	2469.3	3165.4	4181.7	5380.6	5838.5	5221.2
75°	471.1	495.6	512.1	575.0	672.2	842.3	1188.3	1828.2	2788.9	3343.4	2749.2
77.5°	271.9	272.6	283.9	295.1	311.6	330.2	376.5	494.3	854.9	1214.2	884.6
80°	176.0	175.3	184.6	193.2	204.5	213.7	216.4	228.9	264.0	313.0	279.9
82.5°	91.3	102.6	123.1	134.3	155.5	159.5	154.2	149.5	158.1	164.1	168.1
85°	50.3	43.7	65.5	84.7	94.0	95.3	95.3	90.0	93.3	91.3	99.2
87.5°	23.2	21.2	25.8	41.7	44.3	37.7	39.7	35.1	25.1	24.5	27.8
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1433.8	1433.8	1433.8	1433.8	1433.8	1433.8	1433.8	1433.8
2.5°	1427.2	1427.9	1427.9	1429.9	1430.5	1431.8	1433.2	1433.8
5°	1416.0	1417.9	1416.6	1418.6	1418.6	1419.9	1419.9	1420.6
7.5°	1399.4	1401.4	1401.4	1401.4	1400.7	1402.7	1402.7	1402.7
10°	1382.2	1383.5	1382.9	1381.6	1380.2	1382.2	1381.6	1380.9
12.5°	1376.9	1373.6	1371.0	1369.6	1367.0	1367.7	1365.7	1365.7
15°	1380.2	1374.3	1369.6	1367.7	1365.0	1363.7	1362.4	1363.0
17.5°	1388.8	1381.6	1375.6	1372.3	1369.0	1367.0	1364.3	1365.0
20°	1404.0	1395.4	1386.8	1380.2	1374.3	1371.0	1369.0	1368.3
22.5°	1426.5	1414.0	1401.4	1391.5	1383.5	1378.9	1376.9	1375.6
25°	1452.3	1438.5	1423.9	1412.7	1404.7	1398.8	1394.8	1394.8
27.5°	1484.8	1473.5	1460.3	1447.1	1439.8	1433.8	1431.2	1429.9
30°	1539.0	1528.4	1517.9	1505.3	1496.0	1490.1	1485.4	1481.5
32.5°	1608.5	1599.9	1591.3	1582.0	1573.4	1565.5	1558.2	1554.9
35°	1706.4	1699.8	1693.9	1683.3	1680.0	1675.3	1671.4	1668.1
37.5°	1841.4	1838.8	1838.8	1827.5	1824.9	1822.9	1818.9	1819.6
40°	2018.7	2021.4	2018.1	2014.1	2012.1	2006.8	2006.8	2011.5
42.5°	2228.5	2230.5	2237.7	2231.1	2238.4	2231.8	2227.8	2231.1
45°	2472.0	2479.3	2493.8	2487.2	2491.8	2480.6	2466.7	2467.3
47.5°	2745.2	2751.9	2757.8	2753.2	2753.8	2735.3	2716.8	2712.2
50°	3029.1	3031.7	3035.0	3028.4	3029.8	3009.2	2988.1	2988.7
52.5°	3309.6	3322.2	3335.4	3317.6	3313.6	3290.4	3260.7	3248.8
55°	3630.5	3648.4	3633.2	3602.1	3571.0	3539.9	3500.9	3494.2
57.5°	4026.2	3995.8	3948.1	3889.3	3846.2	3802.6	3762.9	3746.3
60°	4576.7	4462.3	4376.2	4288.9	4234.0	4180.4	4128.1	4120.2
62.5°	5354.8	5157.0	4985.6	4805.0	4657.4	4542.3	4450.3	4424.5
65°	6330.1	5862.3	5456.7	5078.3	4749.4	4501.3	4345.1	4276.3
67.5°	6749.6	5825.9	5130.5	4593.3	4163.2	3862.8	3694.1	3610.0
70°	5931.1	4831.5	4075.2	3537.2	3145.5	2825.3	2672.5	2582.5
72.5°	4080.5	3073.4	2430.3	1983.7	1670.7	1402.7	1296.9	1288.9
75°	1832.1	1213.5	836.3	644.5	542.6	471.8	449.9	433.4
77.5°	512.8	379.1	338.1	316.3	295.1	270.6	261.4	263.3
80°	249.4	235.6	226.3	212.4	193.2	172.7	163.4	167.4
82.5°	165.4	163.4	169.4	159.5	131.7	111.8	94.0	86.0
85°	100.6	101.9	103.9	104.5	88.7	62.2	42.3	47.6
87.5°	39.7	45.7	49.6	51.6	48.3	29.8	23.8	24.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)