

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: P299956

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299956
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
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-E1-5WQ-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16602.8 lumens
Efficiency: N/A
Efficacy: 128.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-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

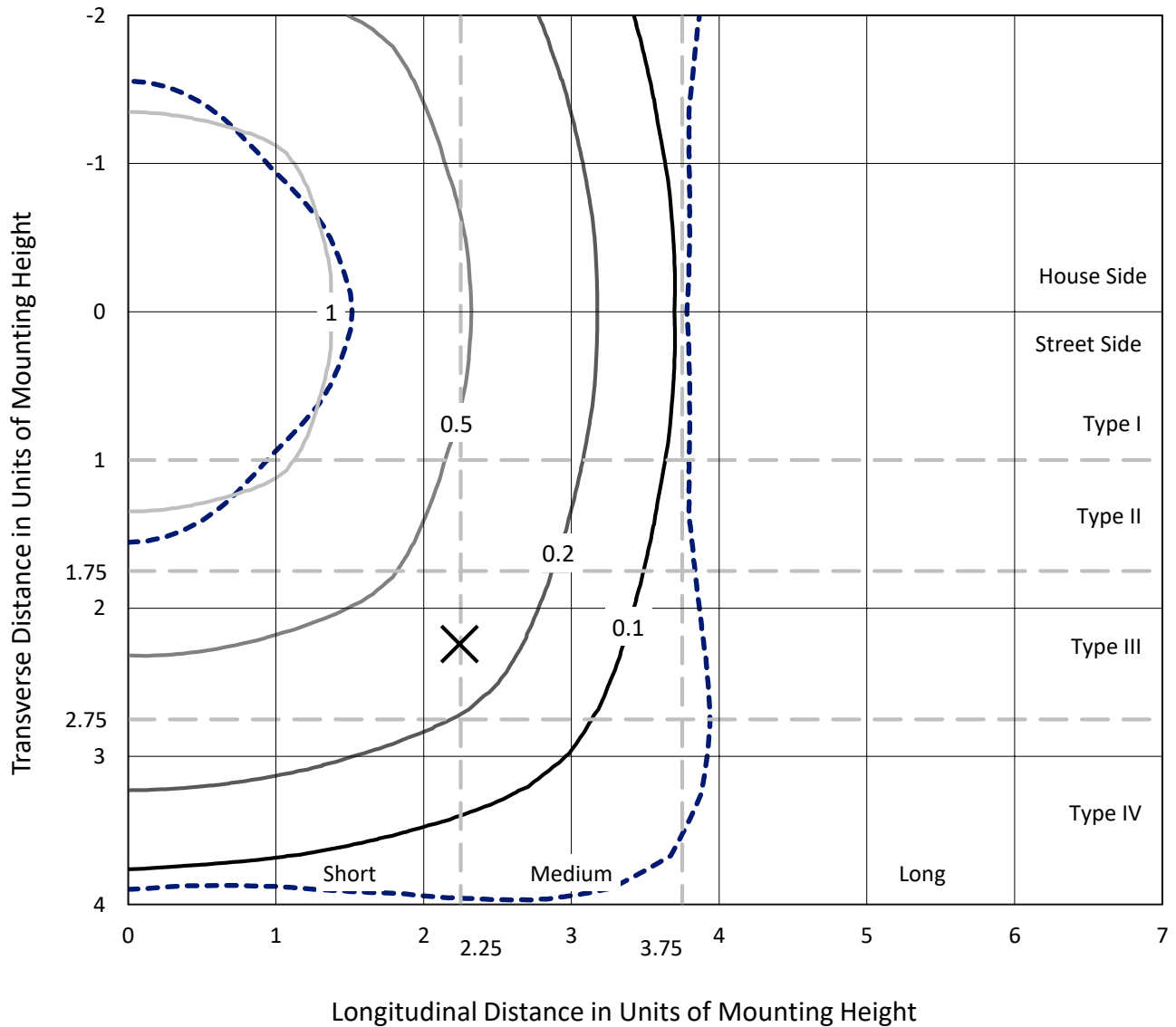


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

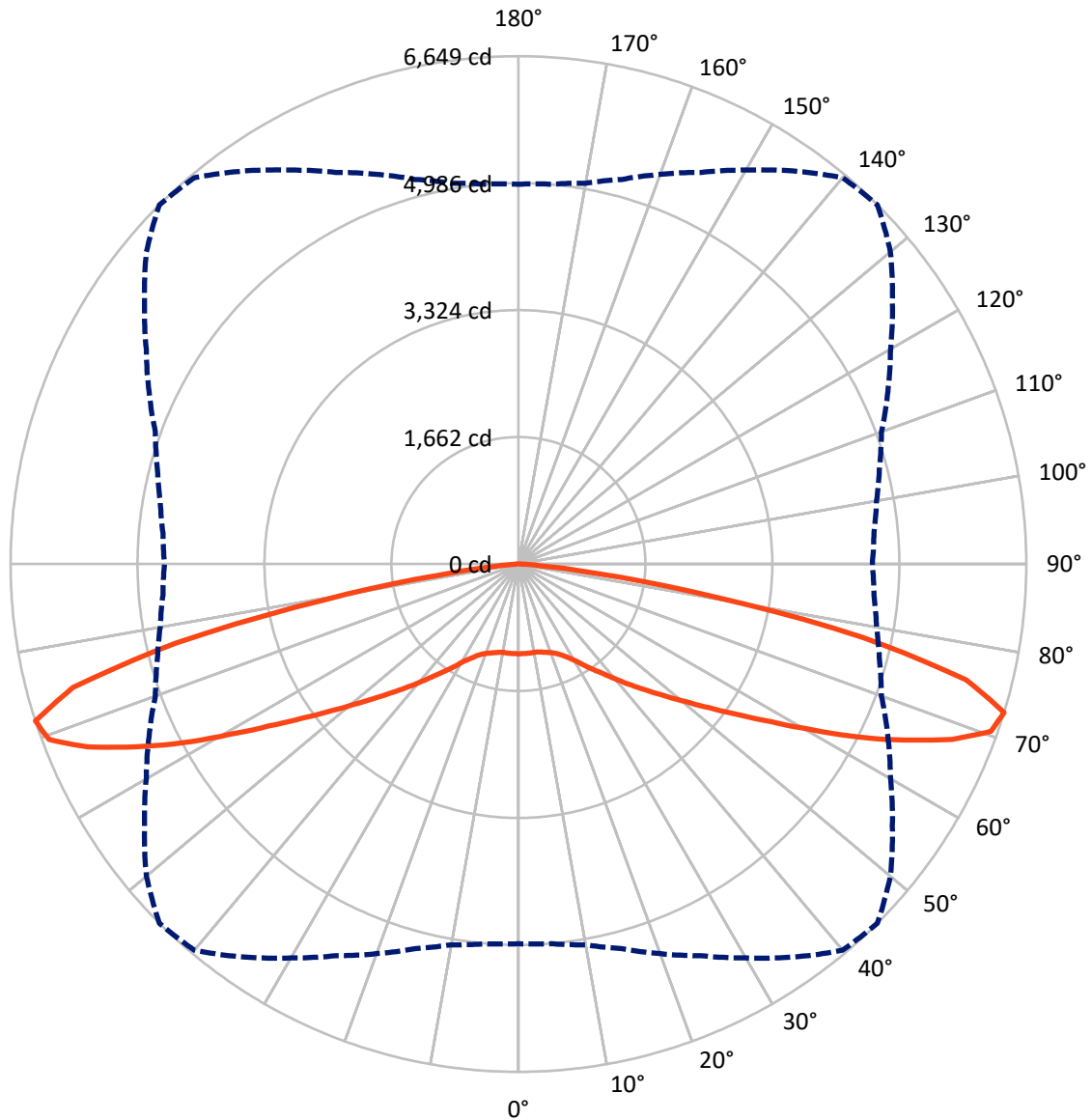


Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8301.4	0.0	8301.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8301.4	0.0	8301.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	16602.8	0.0	16602.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.3	0.7
10°-20°	341.0	2.1
20°-30°	623.1	3.8
30°-40°	1074.3	6.5
40°-50°	1836.6	11.1
50°-60°	2976.8	17.9
60°-70°	4938.5	29.7
70°-80°	4349.6	26.2
80°-90°	350.7	2.1
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°	16602.8	100.0
0°-180°	16602.8	100.0



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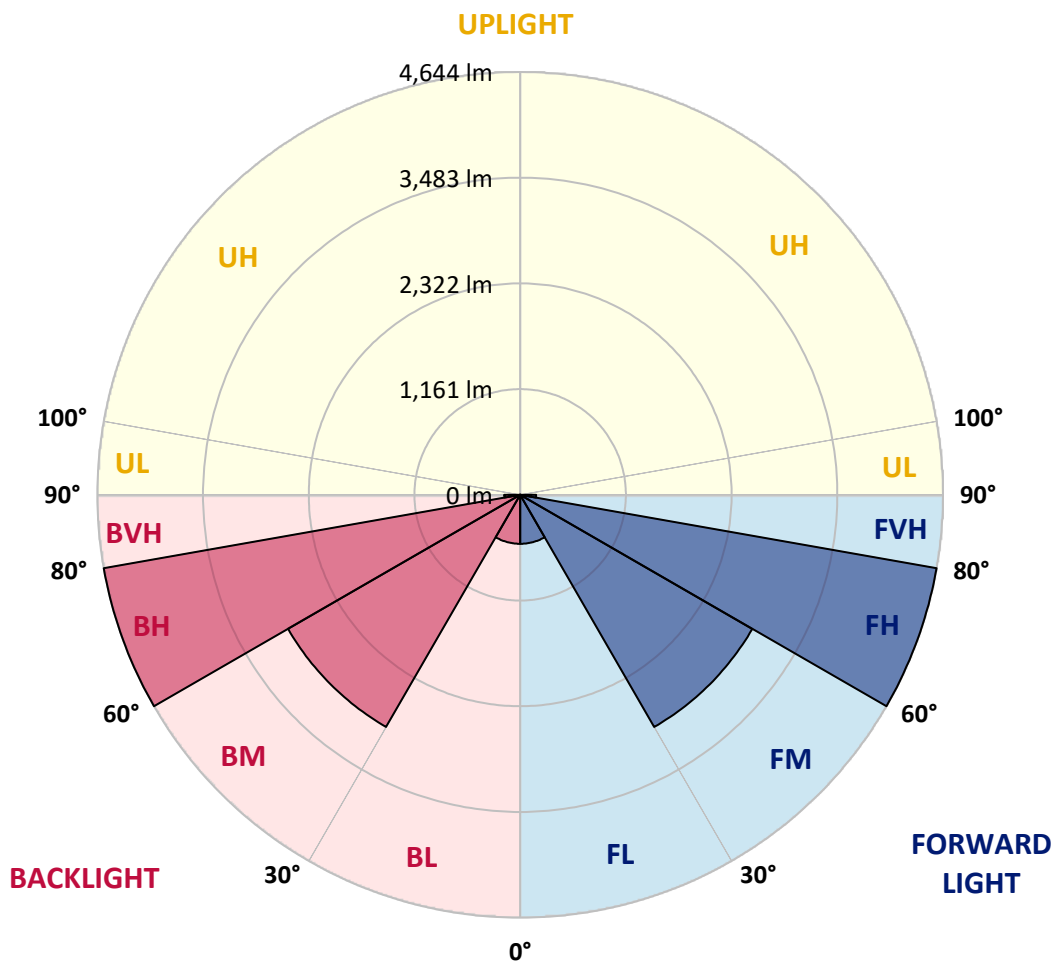
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	538.2	3.2			
FM	(30°-60°)	2943.9	17.7			
FH	(60°-80°)	4644.0	28.0			G2/5000
FVH	(80°-90°)	175.3	1.1			G2/225
BL	(0°-30°)	538.2	3.2	B2/1000		
BM	(30°-60°)	2943.9	17.7	B3/5000		
BH	(60°-80°)	4644.0	28.0	B4/5000		G2/5000
BVH	(80°-90°)	175.3	1.1			G2/225
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°	1175.7	1175.7	1175.7	1175.7	1175.7	1175.7	1175.7	1175.7	1175.7	1175.7	1175.7
2.5°	1175.7	1176.5	1177.3	1176.5	1176.5	1175.7	1175.0	1175.7	1175.0	1173.5	1174.2
5°	1179.5	1181.1	1181.1	1179.5	1180.3	1179.5	1178.0	1178.8	1177.3	1175.0	1175.0
7.5°	1184.1	1184.9	1184.9	1183.4	1184.1	1182.6	1181.1	1180.3	1178.8	1175.7	1173.5
10°	1191.0	1191.7	1191.0	1189.4	1189.4	1187.2	1183.4	1181.8	1178.8	1174.2	1171.9
12.5°	1198.6	1199.3	1198.6	1197.1	1196.3	1192.5	1189.4	1187.2	1184.9	1181.1	1177.3
15°	1209.2	1210.8	1209.2	1206.2	1203.9	1200.9	1199.3	1200.1	1200.9	1197.8	1194.0
17.5°	1229.0	1229.8	1227.5	1220.7	1217.6	1214.6	1214.6	1216.1	1218.4	1216.9	1213.1
20°	1265.6	1263.3	1258.0	1249.6	1245.8	1240.5	1239.7	1240.5	1240.5	1239.7	1236.7
22.5°	1311.3	1309.8	1302.9	1292.2	1286.9	1283.9	1279.3	1275.5	1274.7	1272.4	1269.4
25°	1366.1	1365.3	1357.0	1347.8	1344.0	1340.2	1336.4	1331.1	1326.5	1321.2	1318.1
27.5°	1436.2	1433.1	1420.9	1416.4	1411.0	1408.8	1403.4	1397.3	1393.5	1386.7	1382.9
30°	1513.1	1513.1	1503.2	1501.7	1501.7	1496.3	1490.2	1479.6	1472.7	1465.9	1463.6
32.5°	1590.0	1590.8	1580.9	1583.9	1586.2	1590.0	1591.5	1587.7	1583.1	1582.4	1577.8
35°	1701.2	1698.1	1688.2	1690.5	1689.7	1689.0	1689.0	1697.4	1698.9	1700.4	1691.3
37.5°	1839.0	1839.0	1829.1	1829.1	1824.5	1820.0	1813.9	1819.2	1827.6	1829.9	1823.8
40°	1996.6	2002.0	1989.8	1989.0	1990.5	1976.1	1969.2	1977.6	1982.9	1992.1	1985.2
42.5°	2182.4	2178.6	2166.4	2164.9	2156.5	2152.0	2145.9	2152.7	2161.1	2167.2	2169.5
45°	2360.6	2357.6	2343.9	2343.9	2335.5	2331.7	2334.7	2346.1	2350.0	2358.3	2366.7
47.5°	2536.5	2532.7	2523.6	2527.4	2528.1	2535.0	2544.9	2555.6	2566.2	2577.6	2581.4
50°	2716.2	2717.0	2707.1	2716.2	2727.7	2746.7	2773.3	2790.9	2812.9	2827.4	2832.0
52.5°	2880.0	2883.0	2893.7	2915.0	2937.8	2975.1	3020.8	3063.5	3100.0	3124.4	3122.9
55°	3076.4	3081.0	3106.9	3143.4	3180.7	3237.1	3304.9	3380.2	3441.2	3476.2	3454.1
57.5°	3327.7	3337.6	3366.5	3416.0	3471.6	3544.7	3637.6	3751.1	3845.5	3892.7	3856.9
60°	3672.7	3678.8	3713.8	3768.6	3835.6	3926.2	4050.4	4202.7	4335.9	4398.4	4357.2
62.5°	4127.3	4138.7	4166.9	4222.5	4291.0	4393.8	4545.3	4735.7	4901.7	4988.5	4895.6
65°	4670.2	4706.8	4730.4	4786.7	4850.7	4959.6	5118.0	5322.0	5500.2	5557.3	5450.0
67.5°	5207.8	5239.8	5280.9	5345.7	5410.4	5533.0	5679.9	5877.9	6073.6	6125.4	5958.7
70°	5443.1	5461.4	5525.4	5613.7	5737.8	5882.5	6052.3	6274.7	6516.8	6559.5	6347.8
72.5°	4971.8	4990.0	5061.6	5211.6	5427.9	5657.9	5954.1	6280.8	6600.6	6648.6	6356.9
75°	3760.2	3730.5	3836.4	4035.1	4326.8	4647.4	5061.6	5529.9	5992.2	6052.3	5704.3
77.5°	1943.3	1939.5	2019.5	2266.2	2614.2	2978.9	3435.1	3964.3	4416.6	4599.4	4316.1
80°	547.5	553.6	591.7	714.3	917.6	1181.1	1537.4	2033.2	2403.3	2592.1	2433.7
82.5°	214.7	231.5	246.0	268.8	295.5	334.3	446.2	664.0	890.9	1064.6	871.9
85°	76.9	82.2	116.5	137.8	140.1	147.7	168.3	196.5	236.8	282.5	232.3
87.5°	28.9	32.0	37.3	61.7	60.9	55.6	67.8	70.8	53.3	48.7	60.2
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°	1175.7	1175.7	1175.7	1175.7	1175.7	1175.7	1175.7	1175.7
2.5°	1172.7	1173.5	1173.5	1174.2	1175.0	1175.0	1176.5	1176.5
5°	1173.5	1173.5	1171.9	1172.7	1171.9	1171.9	1172.7	1172.7
7.5°	1171.9	1171.2	1169.6	1168.9	1167.4	1167.4	1167.4	1167.4
10°	1169.6	1168.9	1167.4	1166.6	1165.8	1165.8	1165.8	1165.8
12.5°	1175.7	1173.5	1171.9	1171.2	1171.2	1171.2	1171.2	1171.2
15°	1191.7	1186.4	1182.6	1182.6	1183.4	1184.9	1184.9	1186.4
17.5°	1211.5	1205.4	1201.6	1198.6	1200.1	1202.4	1203.9	1205.4
20°	1235.1	1232.1	1226.8	1223.7	1223.7	1226.8	1228.3	1229.0
22.5°	1267.9	1265.6	1263.3	1259.5	1259.5	1261.0	1264.1	1264.1
25°	1316.6	1315.1	1313.6	1310.5	1309.8	1309.8	1311.3	1312.8
27.5°	1377.5	1378.3	1376.8	1376.0	1373.7	1373.0	1375.2	1374.5
30°	1459.0	1462.8	1466.6	1463.6	1459.8	1457.5	1455.2	1452.2
32.5°	1569.4	1564.9	1561.8	1556.5	1549.6	1543.5	1539.0	1533.6
35°	1673.8	1666.1	1663.1	1667.7	1666.9	1663.1	1657.8	1653.2
37.5°	1801.7	1800.2	1801.7	1810.1	1808.5	1812.3	1801.7	1800.9
40°	1963.1	1964.6	1975.3	1985.2	1990.5	1995.9	1989.8	1983.7
42.5°	2150.4	2149.7	2153.5	2167.2	2176.3	2182.4	2169.5	2168.0
45°	2348.4	2343.1	2346.1	2357.6	2366.7	2373.6	2359.1	2359.1
47.5°	2566.2	2557.1	2547.2	2560.1	2565.5	2570.0	2558.6	2554.8
50°	2809.1	2790.1	2768.8	2774.1	2774.1	2772.6	2758.1	2757.4
52.5°	3087.8	3052.8	3014.0	2999.5	2991.1	2982.0	2956.9	2944.7
55°	3408.4	3355.9	3295.0	3257.7	3237.9	3212.7	3170.8	3159.4
57.5°	3783.1	3700.8	3595.8	3550.1	3505.9	3464.8	3418.3	3405.4
60°	4227.0	4105.9	3966.6	3882.1	3834.1	3794.5	3746.5	3744.2
62.5°	4722.0	4530.9	4373.2	4297.1	4262.1	4227.0	4181.3	4187.4
65°	5225.3	5025.8	4878.1	4816.4	4783.7	4754.7	4709.0	4715.9
67.5°	5721.8	5538.3	5376.1	5312.9	5276.4	5239.8	5198.7	5205.5
70°	6078.2	5850.5	5667.8	5527.6	5440.1	5341.1	5277.1	5261.1
72.5°	5976.2	5625.1	5335.0	5057.0	4894.1	4761.6	4671.7	4632.9
75°	5172.0	4692.3	4319.2	3978.0	3786.1	3630.0	3516.6	3445.7
77.5°	3841.0	3301.8	2860.9	2468.0	2157.3	1948.7	1801.7	1706.5
80°	2102.5	1599.1	1168.9	821.6	603.9	501.8	443.2	415.0
82.5°	654.9	422.6	311.4	268.8	249.8	239.1	221.6	193.4
85°	208.6	182.8	169.8	162.2	154.6	134.8	92.9	84.5
87.5°	80.7	83.0	82.2	77.7	79.2	57.1	45.7	40.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)