

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: P300316

Luminaire Tested: **GLNA-AF-04-LED-E1-AFL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300316
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24165)
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-AFL
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Automotive Frontline OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24549.5 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

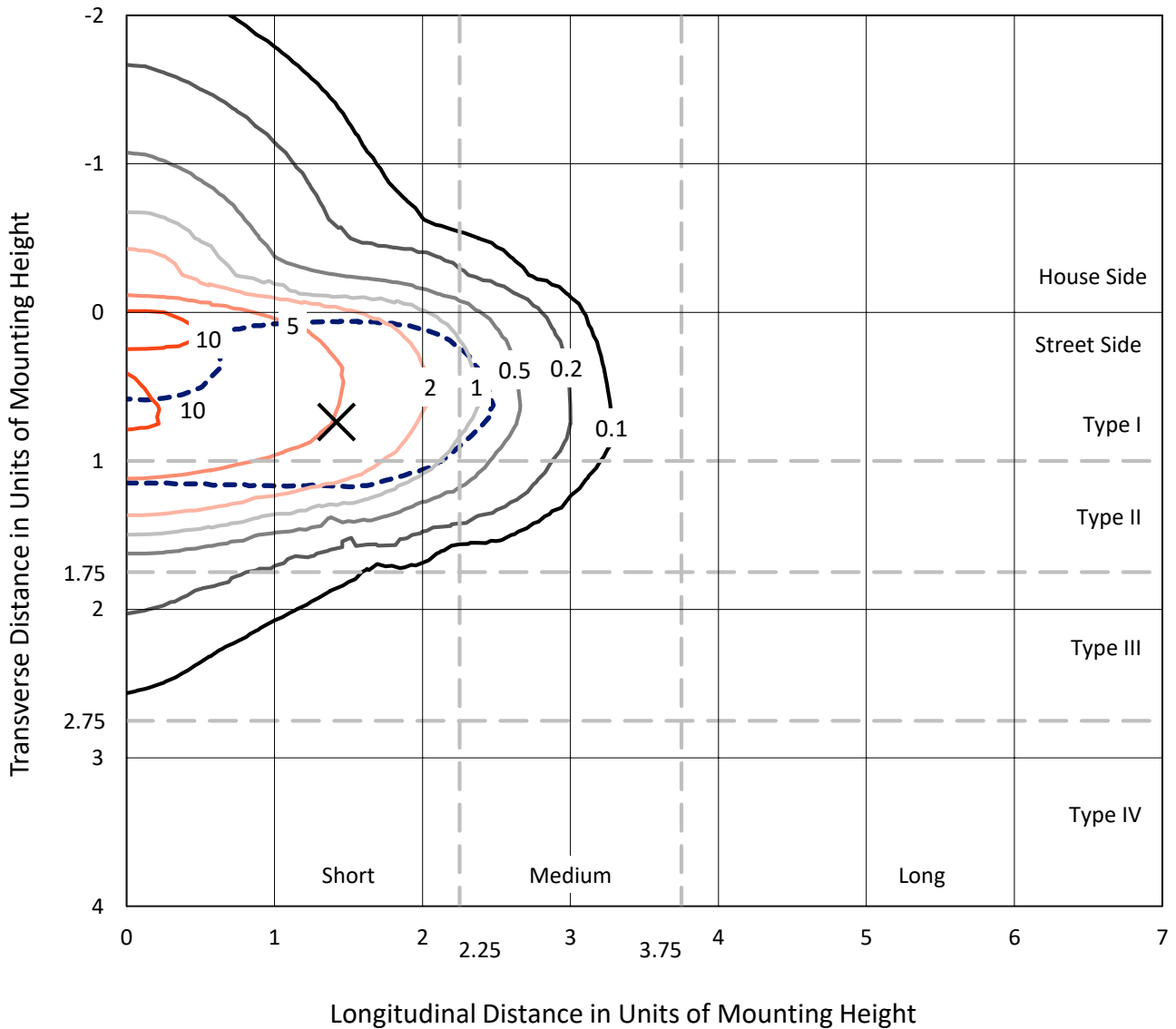
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

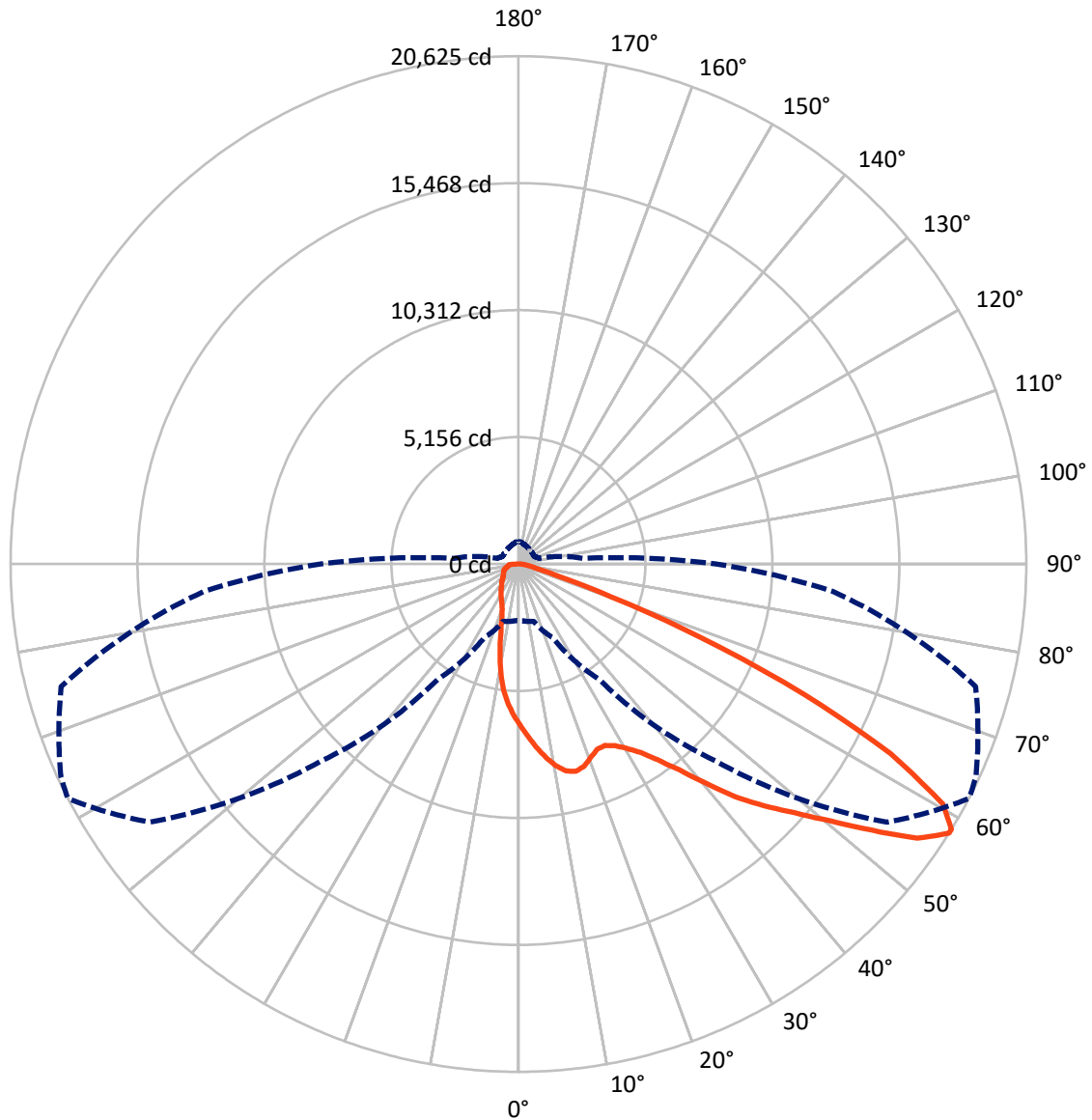
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.7 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3743.9	0.0	3743.9
	% Fixture	15.3	0.0	15.3
Street Side	Lumens	20805.6	0.0	20805.6
	% Fixture	84.7	0.0	84.7
Total	Lumens	24549.5	0.0	24549.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	583.2	2.4
10°-20°	1490.8	6.1
20°-30°	2409.9	9.8
30°-40°	3825.7	15.6
40°-50°	5597.8	22.8
50°-60°	5854.8	23.8
60°-70°	3459.0	14.1
70°-80°	974.4	4.0
80°-90°	353.8	1.4
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°	24549.5	100.0
0°-180°	24549.5	100.0



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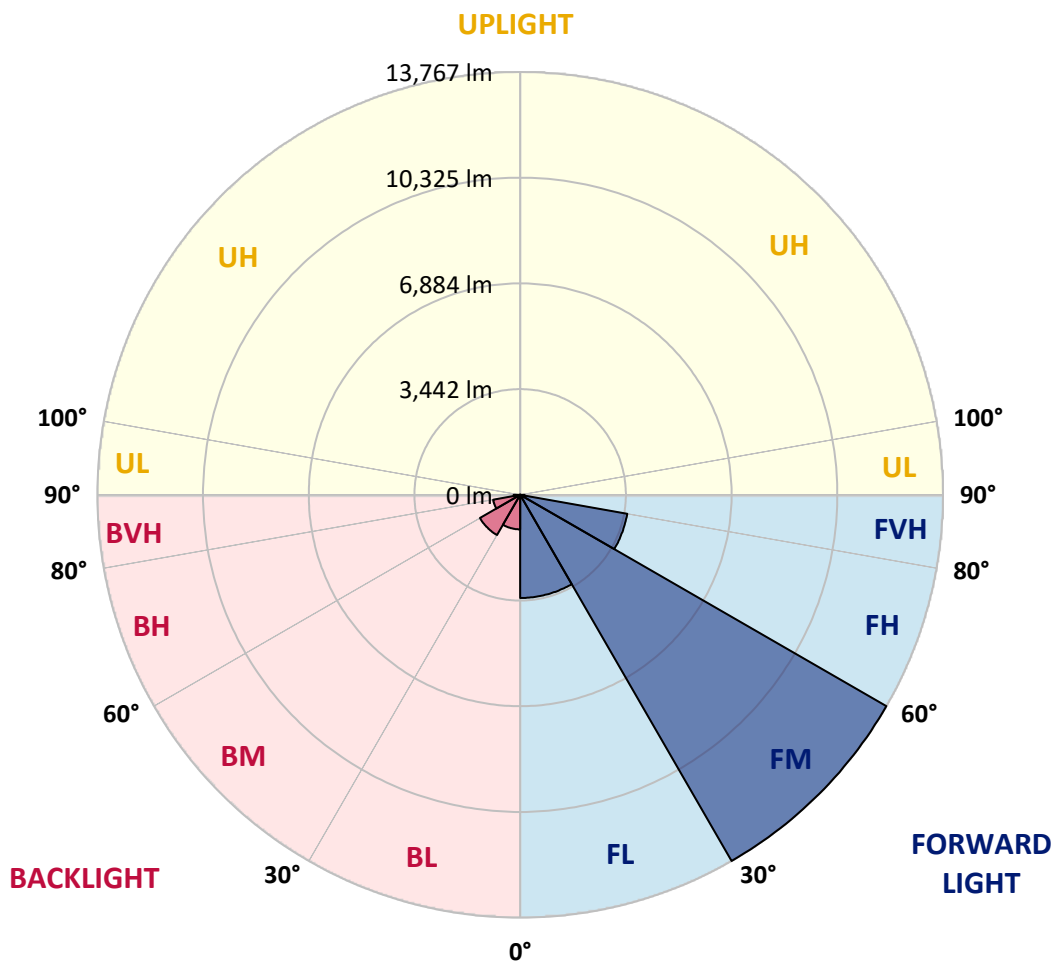
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3358.7	13.7			
FM	(30°-60°)	13767.2	56.1			
FH	(60°-80°)	3540.1	14.4			G2/5000
FVH	(80°-90°)	139.6	0.6			G2/225
BL	(0°-30°)	1125.2	4.6	B3/2500		
BM	(30°-60°)	1511.1	6.2	B2/2500		
BH	(60°-80°)	893.3	3.6	B2/1000		G2/1000
BVH	(80°-90°)	214.2	0.9			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1
2.5°	7451.7	7391.6	7353.4	7319.9	7276.0	7182.3	7056.3	6976.5	6936.1	6798.5	6635.5
5°	8182.3	8129.1	8089.8	8044.7	7966.1	7819.3	7615.8	7454.0	7374.2	7099.1	6773.1
7.5°	8011.2	8033.1	8101.3	8220.4	8322.1	8302.5	8121.0	7915.2	7810.0	7427.4	6932.6
10°	6980.0	7018.2	7136.1	7414.7	7865.5	8327.9	8469.0	8326.8	8220.4	7752.2	7096.8
12.5°	6773.1	6771.9	6781.2	6855.2	7123.4	7774.2	8480.5	8623.9	8560.3	8062.0	7264.4
15°	6857.5	6859.8	6852.9	6884.1	6967.3	7225.1	8126.8	8738.3	8783.4	8374.2	7437.8
17.5°	7079.4	7073.7	7047.1	7047.1	7077.1	7177.7	7710.6	8632.0	8840.0	8650.5	7590.4
20°	7451.7	7425.1	7354.6	7289.8	7257.5	7311.8	7539.5	8386.9	8741.8	8892.1	7716.4
22.5°	7902.5	7881.7	7767.3	7628.5	7516.4	7515.2	7627.4	8173.0	8571.8	9119.8	7822.7
25°	8485.1	8451.6	8281.7	8059.7	7863.2	7788.1	7819.3	8162.6	8479.4	9367.2	7917.5
27.5°	9169.5	9108.2	8907.1	8586.9	8297.9	8146.4	8101.3	8351.0	8563.8	9673.5	8049.3
30°	9999.5	9929.0	9671.2	9253.9	8845.8	8597.3	8501.3	8685.1	8843.5	10046.9	8260.9
32.5°	10944.0	10842.3	10544.0	10083.9	9547.5	9168.4	9012.3	9126.7	9252.7	10496.6	8525.6
35°	12249.1	12127.7	11696.6	11061.9	10456.2	9934.8	9685.1	9768.3	9890.9	11167.1	8908.2
37.5°	13139.3	13084.9	12798.2	12201.7	11542.8	10942.8	10556.7	10605.3	10674.6	12005.2	9398.4
40°	13131.2	13153.1	13158.9	13164.7	12716.2	12141.6	11726.6	11675.7	11661.9	12925.4	9955.6
42.5°	12473.4	12563.6	12854.9	13445.6	13718.4	13454.9	13074.5	12927.7	12854.9	14009.7	10546.3
45°	11466.5	11515.1	12060.7	13214.4	14231.7	14755.4	14467.5	14005.1	13873.3	15006.2	11036.5
47.5°	10947.5	11000.6	11344.0	12601.7	14225.9	15806.2	15972.7	15091.8	14855.9	15873.2	11459.6
50°	9711.7	9822.7	10255.0	11535.9	13706.9	16289.4	17546.0	16386.5	15898.7	16717.1	11883.8
52.5°	7442.4	7613.5	8097.9	9783.3	12390.2	16050.1	18804.9	17956.4	17267.4	17591.1	12248.0
55°	4694.6	4821.7	5228.7	6909.5	9911.7	14805.1	19282.3	19654.6	19041.9	18418.8	12563.6
57.5°	2552.5	2609.1	2761.7	3814.8	6447.1	12052.6	18586.4	20621.0	20366.7	19121.6	12801.7
58°	2284.3	2322.4	2417.2	3306.2	5717.6	11300.0	18277.7	20624.5	20497.3	19224.5	12820.2
60°	1694.7	1675.1	1590.7	1886.6	3182.5	7806.6	16411.9	19799.1	20172.5	19350.5	12730.0
62.5°	1488.9	1441.5	1269.3	1249.7	1547.9	3596.4	12557.8	16959.9	17841.9	18631.5	12182.1
65°	1398.8	1347.9	1126.0	1054.3	1116.7	1521.3	7397.3	12719.6	13825.9	16451.2	10781.0
67.5°	1331.7	1265.8	1034.6	936.4	941.0	1005.7	2965.2	8011.2	9256.2	12490.7	8385.7
70°	1267.0	1195.3	957.2	843.9	817.3	795.3	1179.1	4010.2	5139.6	7889.8	5346.6
72.5°	1197.6	1127.1	889.0	771.1	719.0	646.2	769.9	1640.4	2291.2	3732.8	2425.3
75°	1097.1	1033.5	820.8	706.3	632.3	535.2	581.5	856.6	1027.7	1486.6	1168.7
77.5°	973.4	921.3	744.5	653.1	560.7	434.7	447.4	594.2	658.9	850.8	694.8
80°	699.4	717.9	662.4	587.3	499.4	352.6	343.3	433.5	468.2	546.8	452.0
82.5°	491.3	501.7	548.0	479.7	412.7	277.4	253.2	305.2	326.0	359.5	243.9
85°	338.7	327.2	375.7	334.1	298.3	185.0	173.4	206.9	219.6	223.1	126.0
87.5°	203.5	203.5	217.3	179.2	160.7	95.9	93.6	117.9	126.0	120.2	69.4
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°	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1	6521.1
2.5°	6538.4	6456.3	6281.8	6141.9	5965.0	5781.2	5678.3	5568.5	5493.4	5439.0	5525.7
5°	6588.1	6420.5	6059.8	5717.6	5339.6	4946.6	4648.3	4370.9	4177.8	4057.6	4170.9
7.5°	6666.7	6408.9	5834.4	5249.5	4570.9	3916.6	3331.6	2965.2	2751.3	2646.1	2712.0
10°	6756.9	6390.4	5569.7	4614.8	3643.8	2819.5	2382.5	2234.6	2186.0	2166.4	2175.6
12.5°	6832.0	6351.1	5244.8	3847.2	2736.3	2226.5	2100.5	2097.0	2107.4	2109.7	2113.2
15°	6885.2	6293.3	4762.8	3047.3	2188.3	2028.8	2021.9	2042.7	2062.3	2070.4	2075.0
17.5°	6921.1	6174.3	4218.3	2409.1	1960.6	1932.9	1949.0	1975.6	1996.4	2002.2	2006.8
20°	6917.6	5999.7	3569.8	2009.2	1836.9	1836.9	1864.7	1885.5	1886.6	1879.7	1883.1
22.5°	6881.8	5760.4	2940.9	1796.4	1727.1	1746.7	1774.5	1754.8	1673.9	1620.7	1624.2
25°	6821.6	5474.9	2402.2	1661.2	1625.4	1660.0	1651.9	1504.0	1388.4	1336.4	1336.4
27.5°	6768.5	5137.3	1988.3	1543.3	1523.6	1566.4	1423.1	1289.0	1240.4	1216.1	1208.0
30°	6730.3	4773.2	1712.1	1430.0	1427.7	1396.5	1234.6	1197.6	1189.5	1169.9	1163.0
32.5°	6739.6	4404.4	1535.2	1330.6	1338.7	1195.3	1144.5	1152.5	1145.6	1124.8	1115.6
35°	6815.9	4054.1	1419.6	1240.4	1216.1	1079.7	1091.3	1106.3	1104.0	1075.1	1065.8
37.5°	6952.3	3722.4	1343.3	1165.3	1061.2	1021.9	1040.4	1063.5	1057.8	1038.1	1031.2
40°	7095.6	3410.2	1280.9	1106.3	969.9	982.6	998.8	1011.5	1017.3	1023.1	1018.4
42.5°	7235.5	3084.2	1204.6	1046.2	931.7	945.6	952.6	965.3	996.5	1018.4	1017.3
45°	7318.7	2777.9	1126.0	960.6	901.7	909.8	905.2	930.6	968.7	1004.6	1005.7
47.5°	7411.2	2539.8	1063.5	882.0	872.8	878.6	864.7	890.1	924.8	968.7	973.4
50°	7523.3	2397.6	1013.8	819.6	833.5	833.5	830.0	853.1	901.7	952.6	961.8
52.5°	7650.5	2369.8	972.2	774.5	794.2	793.0	796.5	831.2	884.4	934.1	942.2
55°	7805.4	2445.0	927.1	741.0	756.0	760.7	772.2	811.5	856.6	913.3	916.7
57.5°	7985.7	2597.6	891.3	714.4	721.4	736.4	754.9	790.7	839.3	901.7	905.2
58°	8015.8	2629.9	885.5	712.1	714.4	731.8	752.6	787.2	835.8	904.0	907.5
60°	8017.0	2737.4	872.8	701.7	687.8	716.7	739.8	774.5	830.0	912.1	920.2
62.5°	7732.6	2736.3	863.5	686.7	660.1	695.9	722.5	763.0	824.2	931.7	947.9
65°	6808.9	2486.6	819.6	663.6	638.1	677.4	707.5	754.9	840.4	1017.3	1027.7
67.5°	5325.8	2038.1	737.5	631.2	609.2	658.9	698.2	753.7	857.8	1036.9	1043.9
70°	3521.2	1524.8	647.4	594.2	579.2	637.0	702.9	793.0	838.1	995.3	976.8
72.5°	1827.7	1070.5	574.5	548.0	544.5	617.3	769.9	788.4	818.5	936.4	913.3
75°	959.5	743.3	511.0	497.1	502.9	612.7	908.6	767.6	793.0	895.9	939.8
77.5°	587.3	600.0	456.6	450.8	462.4	598.8	907.5	741.0	756.0	824.2	872.8
80°	393.0	486.7	415.0	416.2	424.3	548.0	815.0	699.4	710.9	779.2	828.9
82.5°	248.5	287.8	376.9	396.5	386.1	452.0	692.5	637.0	653.1	891.3	942.2
85°	126.0	180.3	327.2	381.5	348.0	316.7	561.8	558.4	566.4	642.7	671.6
87.5°	57.8	99.4	255.5	332.9	262.4	197.7	408.1	413.9	446.2	456.6	456.6
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)