

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: P299923

Luminaire Tested: **GLNA-AF-09-LED-E1-SL3-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299923
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24288)
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-SL3-7027-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Medium OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37226.1 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 374
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

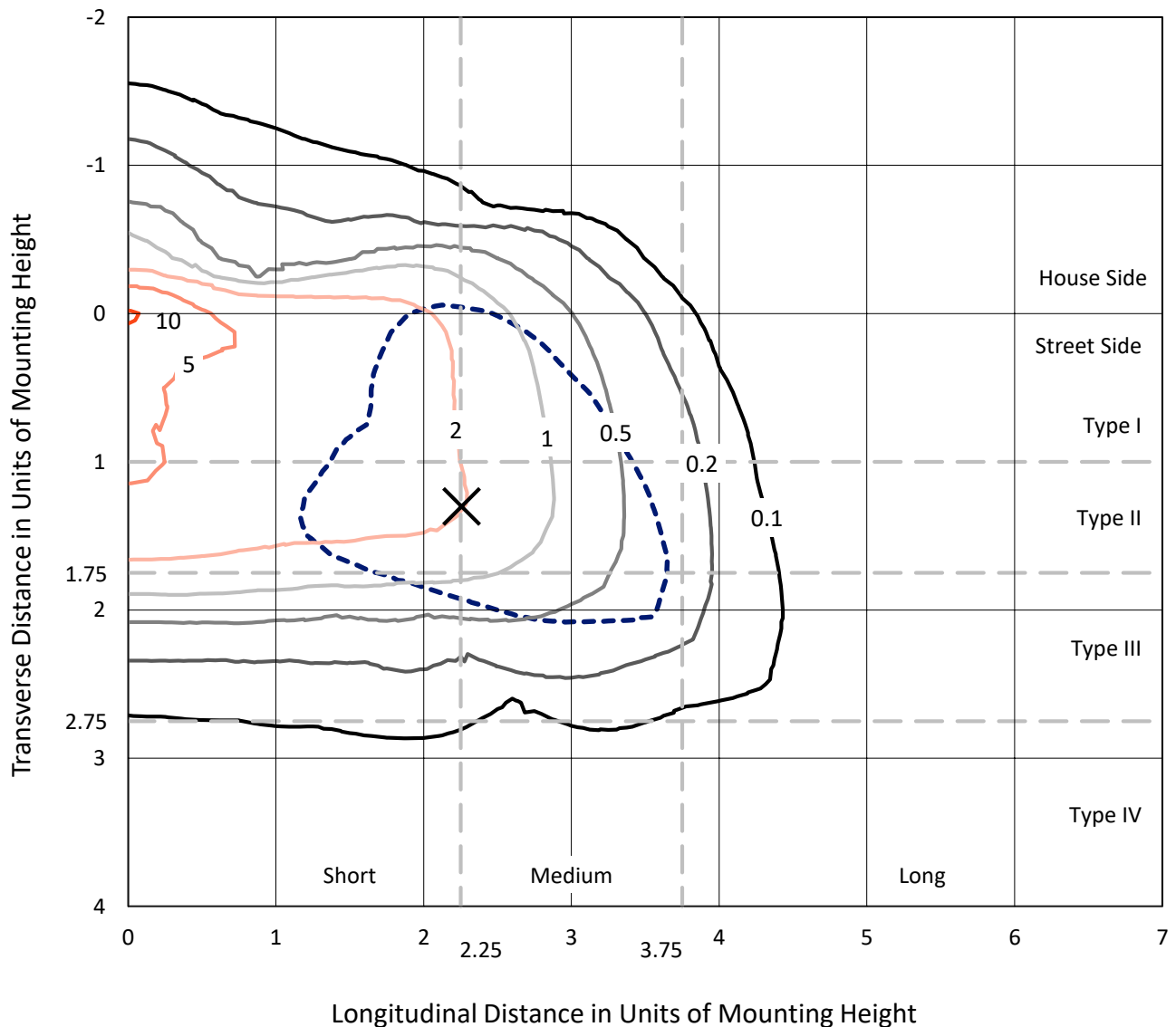


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Iso-Footcandle Lines of Horizontal Illumination

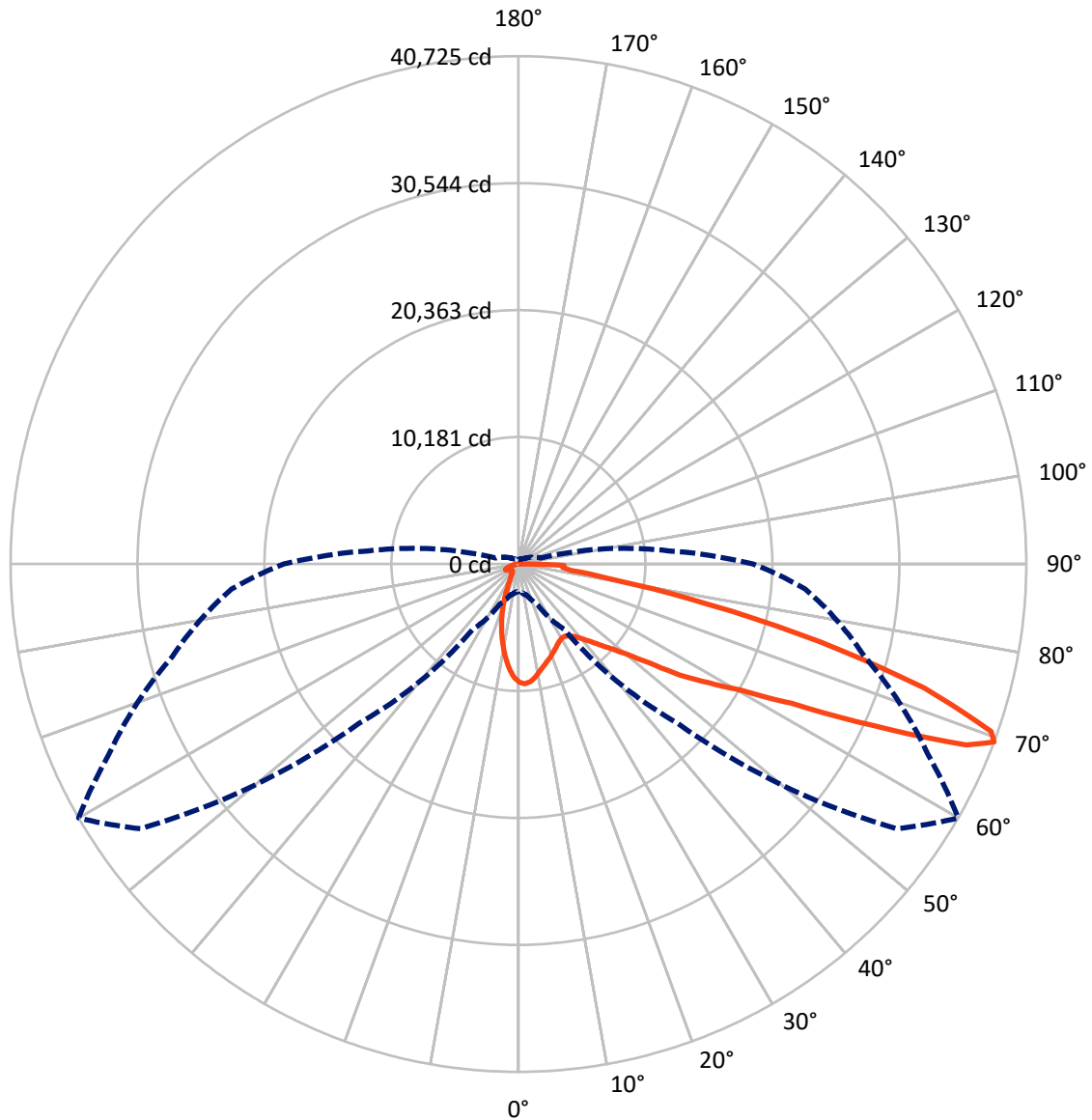
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5296.1	0.0	5296.1
	% Fixture	14.2	0.0	14.2
Street Side	Lumens	31930.0	0.0	31930.0
	% Fixture	85.8	0.0	85.8
Total	Lumens	37226.1	0.0	37226.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	802.1	2.2
10°-20°	1708.8	4.6
20°-30°	2177.4	5.8
30°-40°	2993.3	8.0
40°-50°	4856.9	13.0
50°-60°	7789.3	20.9
60°-70°	10367.0	27.8
70°-80°	5597.4	15.0
80°-90°	934.0	2.5
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°	37226.1	100.0
0°-180°	37226.1	100.0



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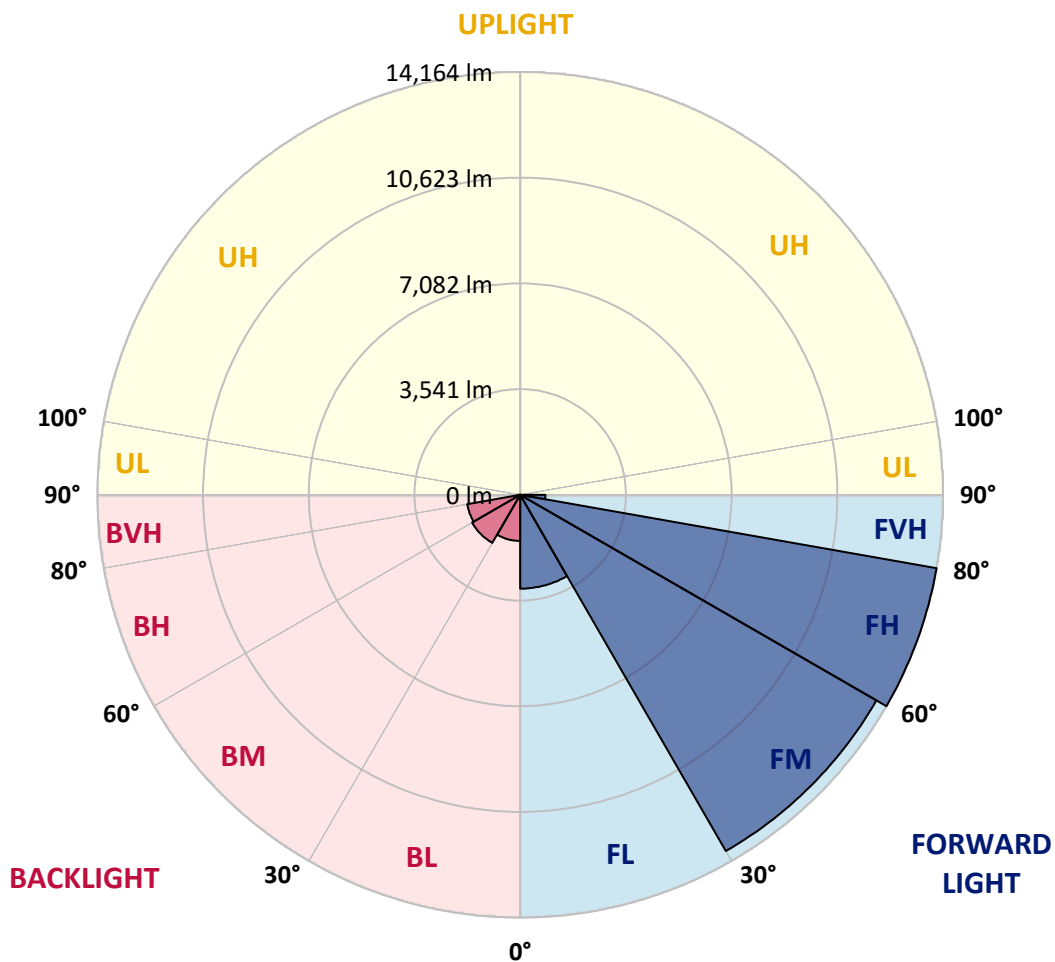
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3143.2	8.4			
FM (30°-60°)	13778.9	37.0			
FH (60°-80°)	14163.8	38.0			G5
FVH (80°-90°)	844.0	2.3			G5
BL (0°-30°)	1545.0	4.2	B3/2500		
BM (30°-60°)	1860.6	5.0	B2/2500		
BH (60°-80°)	1800.5	4.8	B3/2500		G3/2500
BVH (80°-90°)	89.9	0.2			G1/100
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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8
2.5°	9680.0	9701.6	9692.6	9687.2	9703.4	9678.2	9626.0	9609.9	9584.7	9525.3	9424.6
5°	9316.7	9381.5	9377.9	9426.4	9507.4	9528.9	9505.6	9509.2	9462.4	9388.7	9221.4
7.5°	8689.2	8716.1	8730.5	8836.6	8984.1	9102.8	9203.5	9235.8	9214.2	9151.3	8935.5
10°	8041.8	8063.4	8097.5	8221.6	8408.6	8572.3	8762.9	8872.6	8919.3	8908.5	8667.6
12.5°	7486.1	7507.7	7552.7	7692.9	7915.9	8117.3	8394.2	8530.9	8642.4	8708.9	8450.0
15°	6988.0	7034.8	7077.9	7239.8	7489.7	7754.1	8067.0	8239.6	8412.2	8561.5	8257.6
17.5°	6599.6	6646.3	6671.5	6819.0	7085.1	7408.8	7775.6	7978.8	8194.6	8439.2	8067.0
20°	6374.8	6396.4	6385.6	6468.3	6707.5	7050.9	7486.1	7721.7	7982.4	8324.1	7876.3
22.5°	6311.9	6313.7	6274.1	6265.1	6419.8	6709.3	7176.8	7462.7	7782.8	8248.6	7712.7
25°	6464.7	6459.3	6351.4	6263.3	6279.5	6448.5	6878.3	7211.0	7615.6	8232.4	7586.8
27.5°	6804.6	6820.8	6660.7	6495.3	6331.6	6326.3	6651.7	7002.4	7478.9	8306.1	7532.9
30°	7281.1	7308.1	7137.3	6926.9	6619.4	6365.8	6563.6	6878.3	7394.4	8459.0	7523.9
32.5°	7802.6	7831.4	7701.9	7480.7	7077.9	6610.4	6624.8	6889.1	7390.8	8673.0	7585.0
35°	8358.3	8390.6	8324.1	8137.1	7689.3	7061.7	6858.5	7063.5	7507.7	9000.3	7748.7
37.5°	8978.7	9029.0	9047.0	8869.0	8390.6	7657.0	7241.6	7394.4	7772.0	9455.2	8049.0
40°	9872.4	9942.5	9937.1	9681.8	9194.5	8460.8	7833.2	7872.7	8183.8	10063.0	8529.1
42.5°	11584.3	11598.7	11151.0	10595.3	10079.2	9306.0	8530.9	8498.5	8752.1	10832.7	9235.8
45°	13762.0	13702.7	12706.4	11632.9	11003.5	10277.0	9439.0	9280.8	9473.2	11771.4	10120.6
47.5°	15569.3	15432.6	14173.8	12692.1	11981.8	11332.6	10505.4	10228.5	10334.6	12835.9	11264.3
50°	16196.9	16094.4	15051.4	13573.2	12907.9	12620.1	11818.1	11426.1	11454.9	14105.5	12603.9
52.5°	16062.0	16047.6	15351.7	14154.0	13774.6	13972.4	13677.5	13147.0	12866.5	15515.3	14049.7
55°	15743.7	15774.3	15522.5	14830.2	14765.4	15277.9	16106.9	15714.9	14842.8	16937.7	15544.1
57.5°	14637.8	14716.9	15270.8	15680.8	16360.5	17123.0	18063.4	17951.9	16970.1	18475.2	17320.8
60°	11792.9	11976.4	13461.7	15515.3	18002.3	20386.8	20807.6	20548.6	19164.0	20383.2	19667.5
62.5°	8263.0	8453.6	10219.5	13432.9	17732.6	24073.2	25713.2	24596.5	22314.5	23193.9	22704.7
65°	4423.7	4515.4	5864.1	9320.3	14970.4	24833.9	32882.8	31183.5	27302.9	26659.1	25303.2
67.5°	2440.2	2490.6	3006.7	4706.0	9588.3	21868.5	37450.4	38734.3	33537.4	28966.2	24830.3
69°	2206.5	2253.2	2591.3	3564.1	6416.2	18081.4	37004.4	40725.0	36270.7	28737.9	23082.4
70°	2157.9	2201.1	2505.0	3285.4	5193.4	14903.9	35510.1	40216.1	36921.7	27919.7	21557.4
72.5°	1942.1	1988.9	2283.8	2950.9	4438.1	7430.4	28128.3	34003.1	33521.2	24208.1	16351.5
75°	1810.8	1854.0	2353.9	2889.8	4249.3	4702.4	18543.6	25060.4	24641.4	16934.1	8816.8
77.5°	775.0	771.5	1091.5	2445.6	4312.2	4553.2	9964.1	15655.6	14283.5	7238.0	2531.9
80°	517.9	508.9	517.9	719.3	3954.4	4578.3	5220.3	7946.5	6002.6	1845.0	1248.0
82.5°	446.0	438.8	455.0	438.8	1390.0	5225.7	4438.1	4225.9	2853.8	1048.4	618.6
85°	300.3	287.7	392.0	393.8	656.4	4643.1	4999.1	3569.5	2309.0	622.2	305.7
87.5°	143.9	140.3	228.4	278.7	384.8	1886.4	5608.7	3657.6	2328.7	318.3	145.7
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°	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8	9485.8
2.5°	9394.1	9320.3	9248.4	9162.1	9072.2	8971.5	8921.1	8870.8	8858.2	8843.8	8793.5
5°	9135.1	9030.8	8851.0	8653.2	8444.6	8241.4	8086.7	7989.6	7915.9	7878.1	7811.6
7.5°	8800.6	8647.8	8333.1	7991.4	7640.8	7320.7	7043.8	6869.3	6703.9	6626.6	6538.4
10°	8482.4	8254.0	7764.9	7261.3	6757.8	6274.1	5819.1	5497.3	5211.3	5051.3	4938.0
12.5°	8209.0	7896.1	7218.2	6536.6	5846.1	5157.4	4475.8	3940.0	3492.2	3256.6	3136.2
15°	7942.9	7565.2	6698.5	5833.5	4947.0	4010.1	3114.6	2506.8	2136.3	1988.9	1938.5
17.5°	7701.9	7218.2	6177.0	5125.0	4019.1	2886.2	2093.2	1758.7	1616.6	1568.1	1551.9
20°	7441.2	6867.5	5635.7	4384.1	3051.6	2017.6	1634.6	1487.2	1429.6	1415.2	1408.0
22.5°	7189.4	6522.3	5117.8	3591.1	2192.1	1557.3	1404.4	1343.3	1334.3	1346.9	1346.9
25°	6975.4	6213.0	4558.6	2762.1	1609.4	1310.9	1257.0	1242.6	1276.8	1323.5	1332.5
27.5°	6815.4	5959.4	3963.3	2039.2	1282.2	1140.1	1138.3	1161.7	1246.2	1336.1	1354.1
30°	6705.7	5718.4	3326.8	1471.0	1075.4	1003.4	1032.2	1082.5	1206.6	1334.3	1368.5
32.5°	6649.9	5540.4	2663.2	1138.3	920.7	881.1	929.7	990.8	1113.1	1231.8	1276.8
35°	6693.1	5409.1	2037.4	949.5	812.8	782.2	832.6	891.9	963.9	1014.2	1048.4
37.5°	6854.9	5357.0	1537.5	850.6	739.1	710.3	749.9	784.0	812.8	827.2	843.4
40°	7203.8	5412.7	1231.8	800.2	697.7	661.8	677.9	690.5	708.5	722.9	730.1
42.5°	7718.1	5580.0	1104.1	780.4	676.1	624.0	620.4	625.8	649.2	676.1	681.5
45°	8437.4	5874.9	1095.1	793.0	665.4	593.4	577.2	584.4	620.4	661.8	668.9
47.5°	9356.3	6324.5	1167.1	830.8	674.3	577.2	550.3	559.3	604.2	660.0	668.9
50°	10469.4	6952.0	1287.5	886.5	713.9	580.8	541.3	546.7	593.4	654.6	663.6
52.5°	11783.9	7842.2	1418.8	940.5	755.3	604.2	548.5	535.9	579.0	633.0	643.8
55°	13245.9	8984.1	1553.7	989.0	776.8	633.0	562.9	521.5	552.1	597.0	606.0
57.5°	15040.6	10580.9	1787.5	1035.8	791.2	652.8	577.2	507.1	517.9	550.3	557.5
60°	17470.0	12839.5	2199.3	1113.1	823.6	660.0	575.4	494.5	483.7	501.7	505.3
62.5°	20381.4	15292.3	2542.7	1210.2	877.5	665.4	564.7	485.5	455.0	455.0	458.6
65°	22109.5	15948.7	2352.1	1291.1	922.5	660.0	552.1	476.5	433.4	413.6	415.4
67.5°	20643.9	14026.4	2015.8	1307.3	920.7	634.8	532.3	460.4	411.8	381.2	379.4
69°	18807.9	12102.2	1864.8	1264.2	877.5	602.4	507.1	442.4	395.6	363.2	361.4
70°	17328.0	10928.0	1765.9	1217.4	830.8	579.0	487.3	426.2	383.0	352.5	348.9
72.5°	12598.6	7160.6	1508.7	1046.6	685.1	485.5	420.8	374.0	341.7	323.7	320.1
75°	6295.7	3414.9	1224.6	848.8	525.1	388.4	345.3	312.9	296.7	293.1	291.3
77.5°	2068.0	1564.5	875.7	633.0	390.2	303.9	278.7	255.4	251.8	262.5	258.9
80°	1136.5	909.9	555.7	419.0	266.1	223.0	219.4	206.8	212.2	230.2	226.6
82.5°	579.0	472.9	343.5	251.8	179.8	160.0	174.4	167.2	174.4	190.6	188.8
85°	285.9	258.9	217.6	152.9	118.7	102.5	124.1	129.5	133.1	145.7	145.7
87.5°	165.4	152.9	115.1	71.9	59.3	53.9	71.9	70.1	82.7	89.9	88.1
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)