

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: P299987

Luminaire Tested: **GLNA-AF-09-LED-E1-SL3-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299987
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-SL3-7050-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Medium OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34937.4 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 - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G5

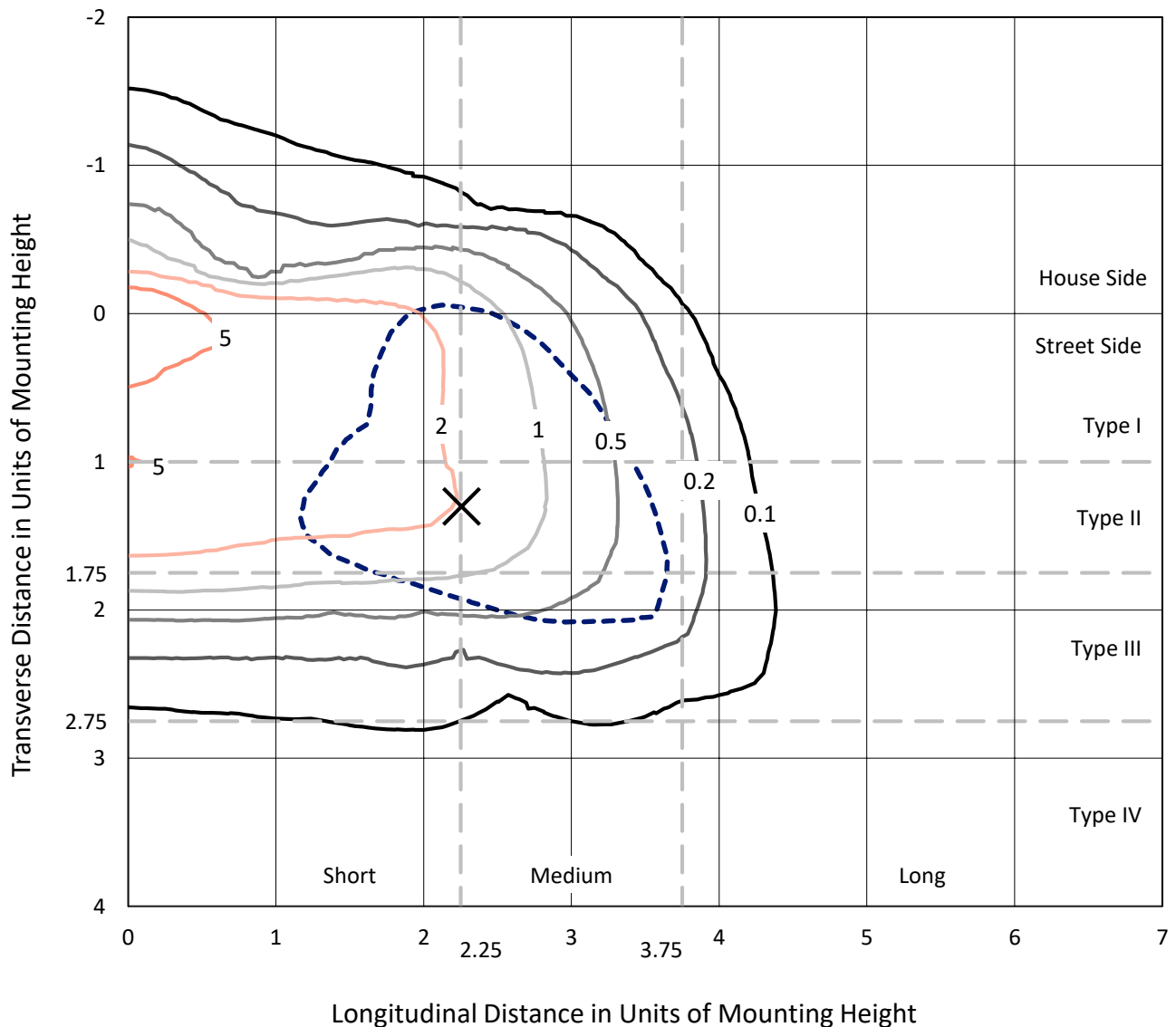
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

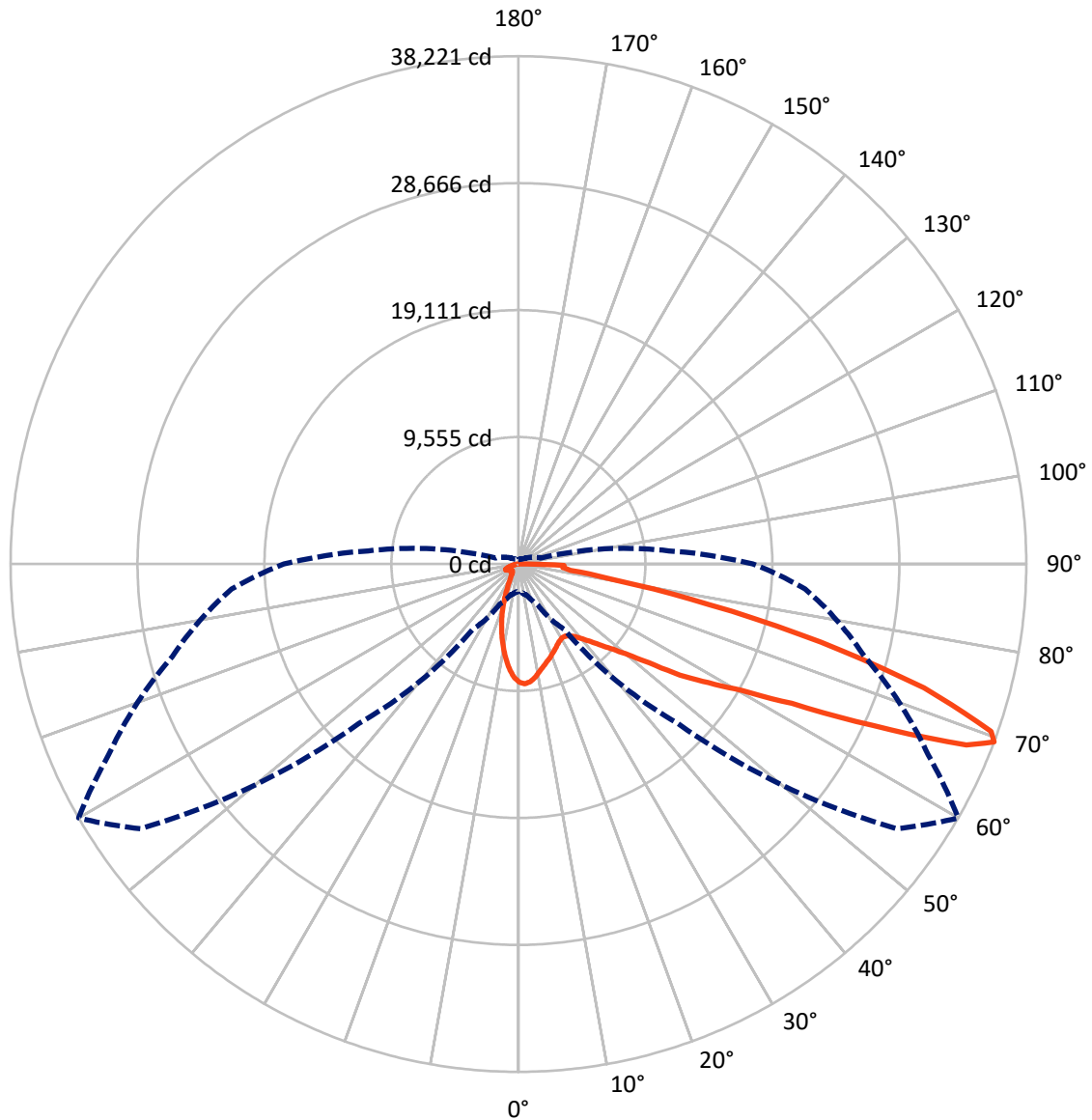
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.9 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	4970.5	0.0	4970.5
	% Fixture	14.2	0.0	14.2
Street Side	Lumens	29966.9	0.0	29966.9
	% Fixture	85.8	0.0	85.8
Total	Lumens	34937.4	0.0	34937.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	752.7	2.2
10°-20°	1603.8	4.6
20°-30°	2043.5	5.8
30°-40°	2809.3	8.0
40°-50°	4558.3	13.0
50°-60°	7310.4	20.9
60°-70°	9729.6	27.8
70°-80°	5253.2	15.0
80°-90°	876.5	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°	34937.4	100.0
0°-180°	34937.4	100.0

Coefficient of Utilization



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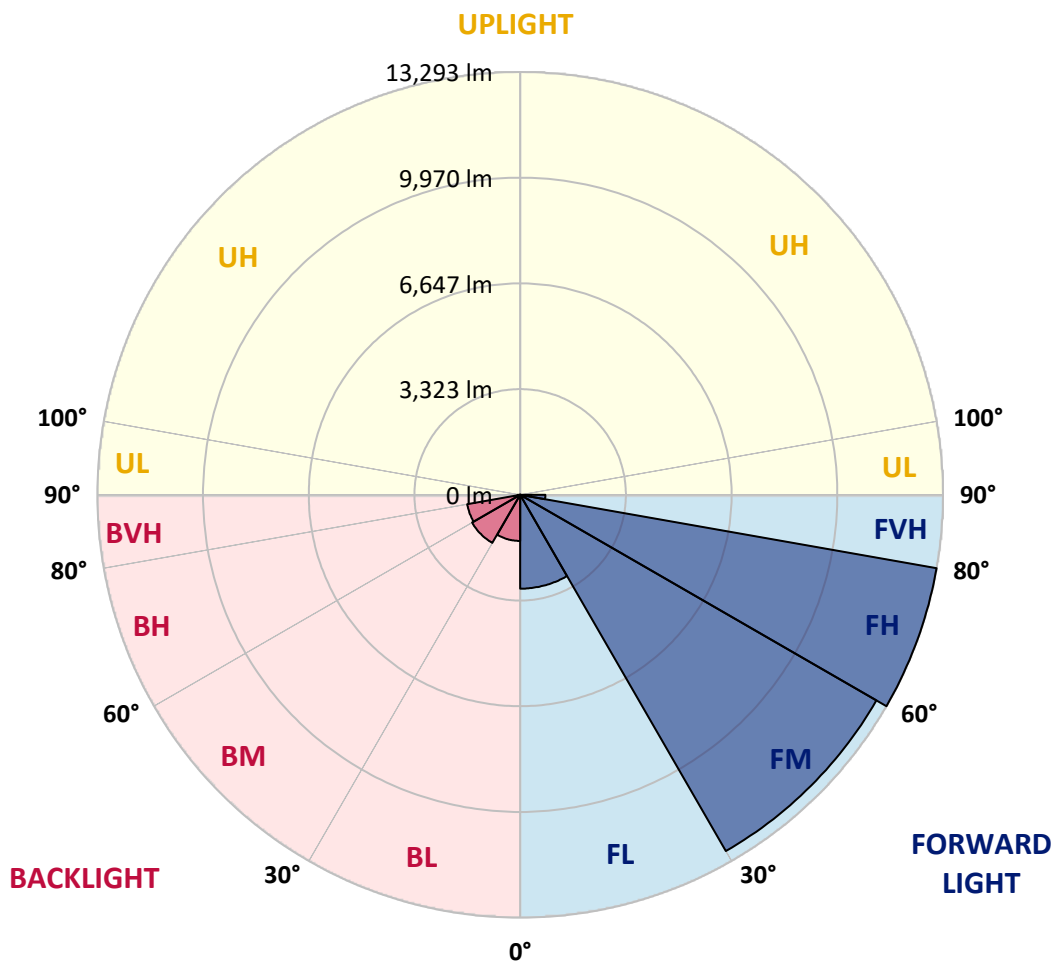
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2950.0	8.4			
FM (30°-60°)	12931.8	37.0			
FH (60°-80°)	13293.0	38.0			G5
FVH (80°-90°)	792.1	2.3			G5
BL (0°-30°)	1450.0	4.2	B3/2500		
BM (30°-60°)	1746.2	5.0	B2/2500		
BH (60°-80°)	1689.8	4.8	B3/2500		G3/2500
BVH (80°-90°)	84.4	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°	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6
2.5°	9084.9	9105.1	9096.7	9091.6	9106.8	9083.2	9034.2	9019.0	8995.4	8939.7	8845.2
5°	8743.9	8804.7	8801.3	8846.9	8922.8	8943.1	8921.2	8924.5	8880.6	8811.5	8654.5
7.5°	8154.9	8180.3	8193.8	8293.3	8431.7	8543.1	8637.6	8668.0	8647.7	8588.7	8386.2
10°	7547.4	7567.6	7599.7	7716.1	7891.7	8045.2	8224.1	8327.1	8371.0	8360.8	8134.7
12.5°	7025.9	7046.1	7088.3	7220.0	7429.2	7618.3	7878.2	8006.4	8111.1	8173.5	7930.5
15°	6558.4	6602.3	6642.8	6794.7	7029.2	7277.3	7571.0	7733.0	7895.0	8035.1	7749.9
17.5°	6193.8	6237.7	6261.3	6399.7	6649.5	6953.3	7297.6	7488.3	7690.8	7920.3	7571.0
20°	5982.9	6003.1	5993.0	6070.6	6295.1	6617.4	7025.9	7247.0	7491.7	7812.3	7392.1
22.5°	5923.8	5925.5	5888.4	5879.9	6025.1	6296.8	6735.6	7003.9	7304.3	7741.5	7238.5
25°	6067.3	6062.2	5960.9	5878.2	5893.4	6052.1	6455.4	6767.7	7147.4	7726.3	7120.4
27.5°	6386.2	6401.4	6251.2	6096.0	5942.4	5937.3	6242.8	6571.9	7019.1	7795.5	7069.8
30°	6833.5	6858.8	6698.5	6501.0	6212.4	5974.4	6160.1	6455.4	6939.8	7938.9	7061.3
32.5°	7322.9	7349.9	7228.4	7020.8	6642.8	6204.0	6217.5	6465.6	6936.4	8139.7	7118.7
35°	7844.4	7874.8	7812.3	7636.8	7216.6	6627.6	6436.9	6629.3	7046.1	8446.9	7272.3
37.5°	8426.7	8473.9	8490.8	8323.7	7874.8	7186.2	6796.3	6939.8	7294.2	8873.9	7554.1
40°	9265.4	9331.3	9326.2	9086.5	8629.2	7940.6	7351.6	7388.7	7680.7	9444.3	8004.7
42.5°	10872.1	10885.6	10465.4	9943.9	9459.5	8733.8	8006.4	7976.0	8214.0	10166.7	8668.0
45°	12915.9	12860.2	11925.2	10917.7	10327.0	9645.2	8858.7	8710.2	8890.8	11047.6	9498.3
47.5°	14612.1	14483.8	13302.4	11911.7	11245.1	10635.8	9859.5	9599.6	9699.2	12046.8	10571.7
50°	15201.1	15104.9	14126.0	12738.7	12114.3	11844.2	11091.5	10723.6	10750.6	13238.3	11829.0
52.5°	15074.5	15061.0	14407.8	13283.8	12927.7	13113.4	12836.6	12338.7	12075.5	14561.4	13186.0
55°	14775.8	14804.5	14568.2	13918.4	13857.7	14338.7	15116.7	14748.8	13930.2	15896.4	14588.4
57.5°	13737.8	13812.1	14331.9	14716.7	15354.6	16070.2	16952.9	16848.3	15926.8	17339.4	16255.9
60°	11067.9	11240.0	12634.1	14561.4	16895.5	19133.4	19528.3	19285.3	17985.8	19130.0	18458.3
62.5°	7755.0	7933.9	9591.2	12607.1	16642.4	22593.2	24132.3	23084.3	20942.6	21767.9	21308.8
65°	4151.7	4237.8	5503.6	8747.3	14050.1	23307.1	30861.2	29266.3	25624.3	25020.1	23747.5
67.5°	2290.2	2337.5	2821.8	4416.7	8998.8	20524.1	35147.9	36352.9	31475.5	27185.4	23303.7
69°	2070.8	2114.7	2432.0	3345.0	6021.7	16969.8	34729.4	38221.2	34040.8	26971.0	21663.2
70°	2025.2	2065.7	2351.0	3083.4	4874.1	13987.6	33326.9	37743.6	34651.7	26203.1	20232.1
72.5°	1822.7	1866.6	2143.4	2769.5	4165.2	6973.6	26398.9	31912.6	31460.3	22719.7	15346.2
75°	1699.5	1740.0	2209.2	2712.1	3988.0	4413.3	17403.5	23519.7	23126.5	15893.0	8274.8
77.5°	727.4	724.0	1024.4	2295.3	4047.1	4273.2	9351.5	14693.1	13405.4	6793.0	2376.3
80°	486.1	477.6	486.1	675.1	3711.2	4296.9	4899.4	7457.9	5633.5	1731.6	1171.3
82.5°	418.5	411.8	427.0	411.8	1304.6	4904.4	4165.2	3966.1	2678.4	983.9	580.6
85°	281.8	270.0	367.9	369.6	616.0	4357.6	4691.8	3350.1	2167.0	583.9	286.9
87.5°	135.0	131.6	214.3	261.6	361.2	1770.4	5263.9	3432.8	2185.6	298.7	136.7
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°	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6	8902.6
2.5°	8816.5	8747.3	8679.8	8598.8	8514.4	8419.9	8372.7	8325.4	8313.6	8300.1	8252.8
5°	8573.5	8475.6	8306.8	8121.2	7925.4	7734.7	7589.6	7498.4	7429.2	7393.8	7331.3
7.5°	8259.6	8116.1	7820.8	7500.1	7171.0	6870.6	6610.7	6447.0	6291.7	6219.2	6136.5
10°	7960.9	7746.5	7287.5	6814.9	6342.4	5888.4	5461.4	5159.3	4890.9	4740.7	4634.4
12.5°	7704.3	7410.7	6774.4	6134.8	5486.7	4840.3	4200.7	3697.7	3277.5	3056.4	2943.3
15°	7454.5	7100.1	6286.7	5474.9	4642.8	3763.6	2923.1	2352.6	2005.0	1866.6	1819.3
17.5°	7228.4	6774.4	5797.2	4809.9	3772.0	2708.7	1964.5	1650.6	1517.2	1471.7	1456.5
20°	6983.7	6445.3	5289.2	4114.6	2864.0	1893.6	1534.1	1395.7	1341.7	1328.2	1321.5
22.5°	6747.4	6121.3	4803.2	3370.3	2057.3	1461.5	1318.1	1260.7	1252.3	1264.1	1264.1
25°	6546.6	5831.0	4278.3	2592.3	1510.5	1230.3	1179.7	1166.2	1198.3	1242.1	1250.6
27.5°	6396.4	5593.0	3719.7	1913.8	1203.3	1070.0	1068.3	1090.3	1169.6	1254.0	1270.8
30°	6293.4	5366.9	3122.2	1380.5	1009.2	941.7	968.7	1016.0	1132.4	1252.3	1284.3
32.5°	6241.1	5199.8	2499.5	1068.3	864.1	827.0	872.5	929.9	1044.7	1156.1	1198.3
35°	6281.6	5076.6	1912.2	891.1	762.8	734.1	781.4	837.1	904.6	951.9	983.9
37.5°	6433.5	5027.6	1443.0	798.3	693.6	666.6	703.8	735.8	762.8	776.3	791.5
40°	6760.9	5080.0	1156.1	751.0	654.8	621.1	636.3	648.1	665.0	678.5	685.2
42.5°	7243.6	5236.9	1036.2	732.5	634.6	585.6	582.3	587.3	609.3	634.6	639.6
45°	7918.7	5513.7	1027.8	744.3	624.4	556.9	541.7	548.5	582.3	621.1	627.8
47.5°	8781.1	5935.6	1095.3	779.7	632.9	541.7	516.4	524.9	567.1	619.4	627.8
50°	9825.8	6524.6	1208.4	832.0	670.0	545.1	508.0	513.1	556.9	614.3	622.8
52.5°	11059.5	7360.0	1331.6	882.7	708.8	567.1	514.7	502.9	543.4	594.1	604.2
55°	12431.6	8431.7	1458.2	928.2	729.1	594.1	528.2	489.4	518.1	560.3	568.8
57.5°	14115.9	9930.4	1677.6	972.1	742.6	612.6	541.7	475.9	486.1	516.4	523.2
60°	16395.9	12050.1	2064.1	1044.7	773.0	619.4	540.1	464.1	454.0	470.9	474.2
62.5°	19128.3	14352.2	2386.4	1135.8	823.6	624.4	529.9	455.7	427.0	427.0	430.4
65°	20750.2	14968.2	2207.5	1211.8	865.8	619.4	518.1	447.2	406.7	388.2	389.9
67.5°	19374.7	13164.0	1891.9	1227.0	864.1	595.8	499.6	432.0	386.5	357.8	356.1
69°	17651.6	11358.2	1750.1	1186.4	823.6	565.4	475.9	415.2	371.3	340.9	339.2
70°	16262.6	10256.1	1657.3	1142.6	779.7	543.4	457.4	400.0	359.5	330.8	327.4
72.5°	11824.0	6720.4	1416.0	982.2	643.0	455.7	394.9	351.0	320.7	303.8	300.4
75°	5908.6	3204.9	1149.3	796.6	492.8	364.5	324.0	293.7	278.5	275.1	273.4
77.5°	1940.8	1468.3	821.9	594.1	366.2	285.2	261.6	239.7	236.3	246.4	243.0
80°	1066.6	854.0	521.5	393.2	249.8	209.3	205.9	194.1	199.1	216.0	212.6
82.5°	543.4	443.9	322.3	236.3	168.8	150.2	163.7	157.0	163.7	178.9	177.2
85°	268.3	243.0	204.2	143.5	111.4	96.2	116.5	121.5	124.9	136.7	136.7
87.5°	155.3	143.5	108.0	67.5	55.7	50.6	67.5	65.8	77.6	84.4	82.7
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)