

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: P299989

Luminaire Tested: **GLNA-AF-10-LED-E1-SL3-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299989
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-10-LED-E1-SL3-7027-600
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 2700K 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: 33607.8 lumens
Efficiency: N/A
Efficacy: 104.0 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

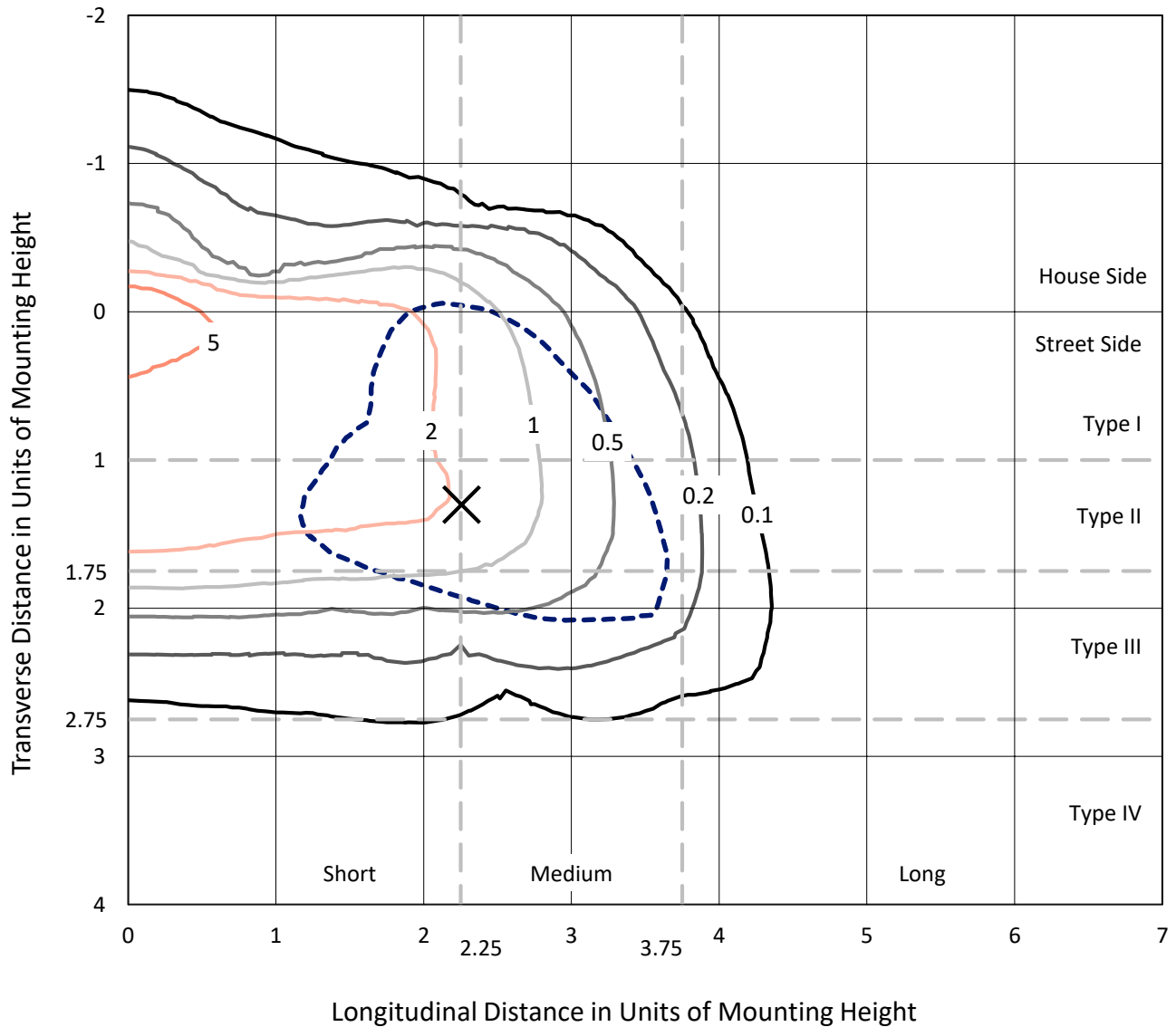
Input Watts (W): 323
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

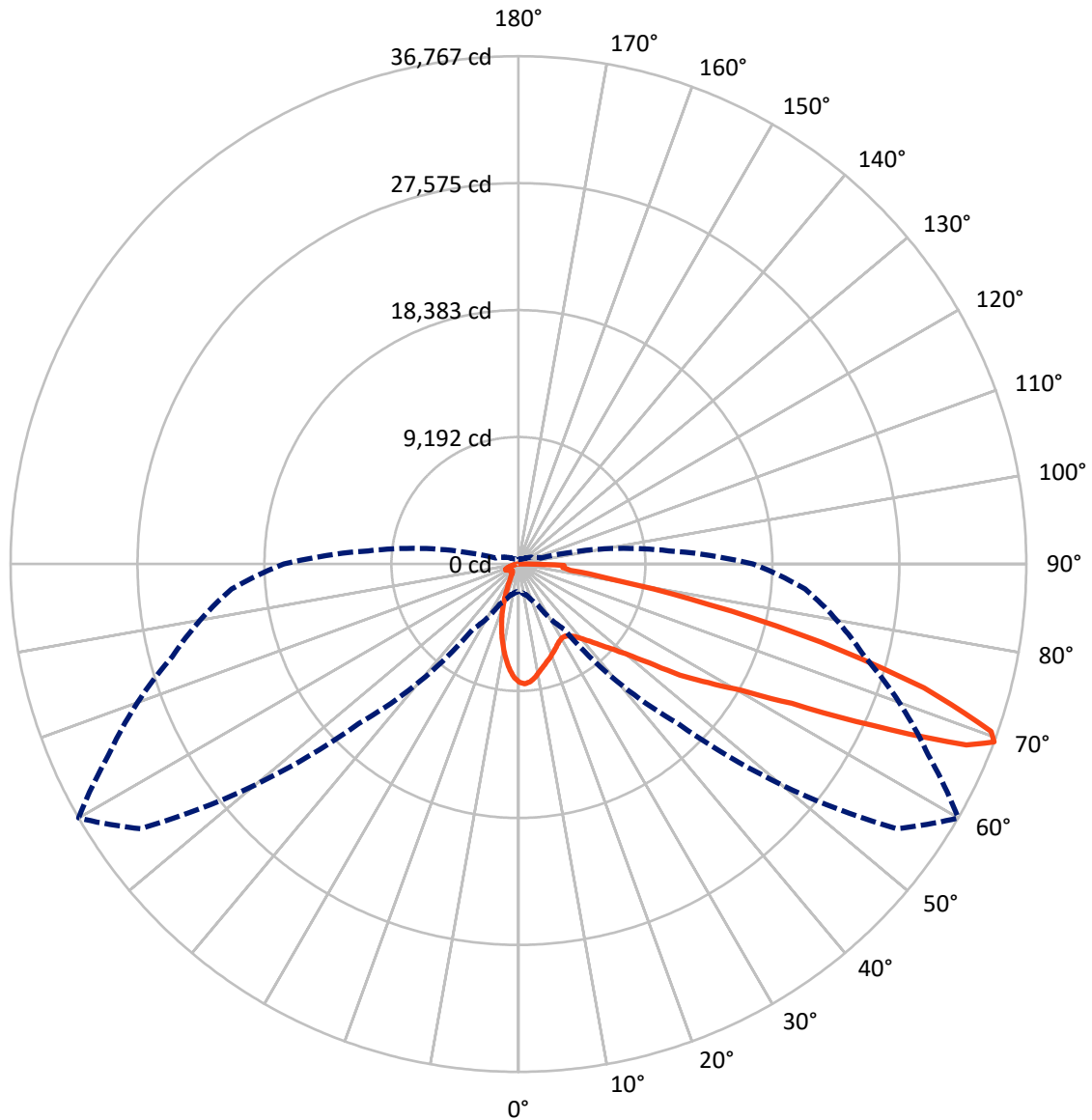
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.5 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	4781.3	0.0	4781.3
	% Fixture	14.2	0.0	14.2
Street Side	Lumens	28826.5	0.0	28826.5
	% Fixture	85.8	0.0	85.8
Total	Lumens	33607.8	0.0	33607.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	724.1	2.2
10°-20°	1542.7	4.6
20°-30°	1965.7	5.8
30°-40°	2702.4	8.0
40°-50°	4384.9	13.0
50°-60°	7032.2	20.9
60°-70°	9359.3	27.8
70°-80°	5053.3	15.0
80°-90°	843.2	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°	33607.8	100.0
0°-180°	33607.8	100.0



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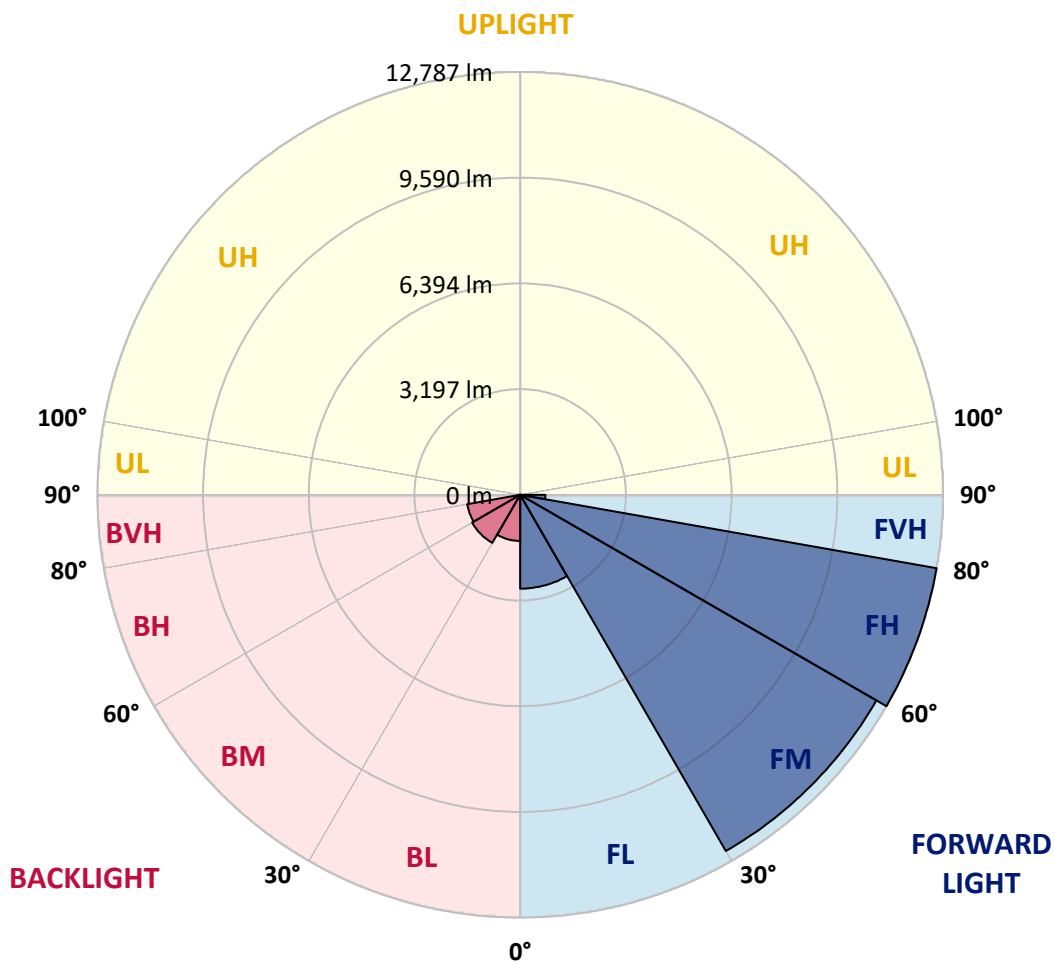
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2837.7	8.4			
FM	(30°-60°)	12439.7	37.0			
FH	(60°-80°)	12787.1	38.0			G5
FVH	(80°-90°)	762.0	2.3			G5
BL	(0°-30°)	1394.9	4.2	B3/2500		
BM	(30°-60°)	1679.8	5.0	B2/2500		
BH	(60°-80°)	1625.5	4.8	B3/2500		G3/2500
BVH	(80°-90°)	81.2	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°	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8
2.5°	8739.1	8758.6	8750.5	8745.6	8760.2	8737.5	8690.4	8675.8	8653.1	8599.5	8508.6
5°	8411.2	8469.6	8466.4	8510.2	8583.3	8602.7	8581.6	8584.9	8542.7	8476.1	8325.1
7.5°	7844.6	7868.9	7881.9	7977.7	8110.8	8218.0	8308.9	8338.1	8318.6	8261.8	8067.0
10°	7260.1	7279.6	7310.5	7422.5	7591.3	7739.1	7911.2	8010.2	8052.4	8042.7	7825.1
12.5°	6758.5	6778.0	6818.6	6945.2	7146.5	7328.3	7578.3	7701.7	7802.4	7862.4	7628.7
15°	6308.8	6351.0	6390.0	6536.1	6761.7	7000.4	7282.9	7438.7	7594.6	7729.3	7455.0
17.5°	5958.1	6000.3	6023.1	6156.2	6396.5	6688.7	7019.9	7203.3	7398.1	7618.9	7282.9
20°	5755.2	5774.7	5764.9	5839.6	6055.5	6365.6	6758.5	6971.2	7206.6	7515.0	7110.8
22.5°	5698.4	5700.0	5664.3	5656.2	5795.8	6057.2	6479.3	6737.4	7026.4	7446.8	6963.0
25°	5836.4	5831.5	5734.1	5654.5	5669.1	5821.8	6209.8	6510.1	6875.4	7432.2	6849.4
27.5°	6143.2	6157.8	6013.3	5864.0	5716.2	5711.4	6005.2	6321.8	6752.0	7498.8	6800.7
30°	6573.4	6597.8	6443.5	6253.6	5976.0	5747.1	5925.7	6209.8	6675.7	7636.8	6792.6
32.5°	7044.2	7070.2	6953.3	6753.6	6390.0	5967.9	5980.9	6219.5	6672.4	7830.0	6847.8
35°	7545.9	7575.1	7515.0	7346.2	6941.9	6375.4	6191.9	6377.0	6778.0	8125.4	6995.5
37.5°	8106.0	8151.4	8167.7	8006.9	7575.1	6912.7	6537.7	6675.7	7016.6	8536.2	7266.6
40°	8912.8	8976.1	8971.3	8740.7	8300.8	7638.4	7071.8	7107.5	7388.4	9084.9	7700.1
42.5°	10458.4	10471.4	10067.1	9565.5	9099.5	8401.4	7701.7	7672.5	7901.4	9779.8	8338.1
45°	12424.4	12370.8	11471.4	10502.2	9934.0	9278.1	8521.6	8378.7	8552.4	10627.2	9136.9
47.5°	14056.0	13932.6	12796.2	11458.4	10817.2	10231.1	9484.3	9234.3	9330.1	11588.3	10169.4
50°	14622.6	14530.0	13588.4	12253.9	11653.2	11393.5	10669.4	10315.5	10341.5	12734.5	11378.9
52.5°	14500.8	14487.8	13859.5	12778.3	12435.8	12614.3	12348.1	11869.2	11615.9	14007.3	12684.1
55°	14213.4	14241.0	14013.8	13388.7	13330.3	13793.0	14541.4	14187.5	13400.1	15291.4	14033.2
57.5°	13215.0	13286.4	13786.5	14156.6	14770.3	15458.6	16307.7	16207.1	15320.7	16679.5	15637.2
60°	10646.7	10812.3	12153.3	14007.3	16252.5	18405.2	18785.1	18551.4	17301.3	18402.0	17755.9
62.5°	7459.8	7631.9	9226.2	12127.3	16009.0	21733.3	23213.9	22205.8	20145.6	20939.5	20497.9
65°	3993.7	4076.5	5294.1	8414.4	13515.4	22420.1	29686.7	28152.5	24649.1	24067.9	22843.8
67.5°	2203.0	2248.5	2714.4	4248.6	8656.3	19743.0	33810.3	34969.5	30277.7	26150.8	22416.8
69°	1992.0	2034.2	2339.4	3217.7	5792.5	16324.0	33407.7	36766.6	32745.3	25944.6	20838.8
70°	1948.2	1987.1	2261.5	2966.1	4688.6	13455.3	32058.6	36307.2	33333.0	25205.9	19462.1
72.5°	1753.3	1795.6	2061.8	2664.1	4006.7	6708.2	25394.3	30698.1	30263.0	21855.1	14762.2
75°	1634.8	1673.8	2125.1	2608.9	3836.3	4245.4	16741.2	22624.6	22246.4	15288.2	7959.9
77.5°	699.7	696.5	985.4	2207.9	3893.1	4110.6	8995.6	14133.9	12895.2	6534.5	2285.8
80°	467.6	459.4	467.6	649.4	3570.0	4133.3	4712.9	7174.1	5419.1	1665.7	1126.7
82.5°	402.6	396.1	410.7	396.1	1254.9	4717.8	4006.7	3815.1	2576.4	946.5	558.5
85°	271.1	259.8	353.9	355.5	592.6	4191.8	4513.2	3222.6	2084.5	561.7	276.0
87.5°	129.9	126.6	206.2	251.6	347.4	1703.0	5063.6	3302.1	2102.4	287.4	131.5
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°	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8	8563.8
2.5°	8481.0	8414.4	8349.5	8271.6	8190.4	8099.5	8054.0	8008.6	7997.2	7984.2	7938.8
5°	8247.2	8153.0	7990.7	7812.1	7623.8	7440.3	7300.7	7213.1	7146.5	7112.4	7052.3
7.5°	7945.2	7807.3	7523.1	7214.7	6898.1	6609.1	6359.1	6201.6	6052.3	5982.5	5902.9
10°	7657.9	7451.7	7010.1	6555.6	6101.0	5664.3	5253.5	4962.9	4704.8	4560.3	4458.0
12.5°	7411.1	7128.6	6516.6	5901.3	5277.9	4656.1	4040.8	3557.0	3152.8	2940.1	2831.3
15°	7170.9	6829.9	6047.4	5266.5	4466.2	3620.3	2811.8	2263.1	1928.7	1795.6	1750.1
17.5°	6953.3	6516.6	5576.6	4626.9	3628.4	2605.7	1889.7	1587.8	1459.5	1415.7	1401.1
20°	6717.9	6200.0	5087.9	3958.0	2755.0	1821.5	1475.7	1342.6	1290.7	1277.7	1271.2
22.5°	6490.6	5888.3	4620.4	3242.1	1979.0	1405.9	1267.9	1212.7	1204.6	1216.0	1216.0
25°	6297.4	5609.1	4115.5	2493.6	1453.0	1183.5	1134.8	1121.8	1152.7	1194.9	1203.0
27.5°	6152.9	5380.2	3578.1	1841.0	1157.5	1029.3	1027.7	1048.8	1125.1	1206.2	1222.5
30°	6053.9	5162.6	3003.4	1328.0	970.8	905.9	931.9	977.3	1089.3	1204.6	1235.5
32.5°	6003.6	5001.9	2404.4	1027.7	831.2	795.5	839.3	894.5	1004.9	1112.1	1152.7
35°	6042.5	4883.4	1839.4	857.2	733.8	706.2	751.7	805.2	870.2	915.6	946.5
37.5°	6188.7	4836.3	1388.1	767.9	667.2	641.3	677.0	707.8	733.8	746.8	761.4
40°	6503.6	4886.6	1112.1	722.4	629.9	597.4	612.0	623.4	639.6	652.6	659.1
42.5°	6967.9	5037.6	996.8	704.6	610.4	563.3	560.1	565.0	586.1	610.4	615.3
45°	7617.3	5303.9	988.7	715.9	600.7	535.7	521.1	527.6	560.1	597.4	603.9
47.5°	8446.9	5709.7	1053.6	750.0	608.8	521.1	496.8	504.9	545.5	595.8	603.9
50°	9451.8	6276.3	1162.4	800.4	644.5	524.4	488.7	493.5	535.7	590.9	599.1
52.5°	10638.6	7079.9	1280.9	849.1	681.9	545.5	495.2	483.8	522.8	571.5	581.2
55°	11958.5	8110.8	1402.7	892.9	701.3	571.5	508.1	470.8	498.4	539.0	547.1
57.5°	13578.7	9552.5	1613.7	935.1	714.3	589.3	521.1	457.8	467.6	496.8	503.3
60°	15772.0	11591.6	1985.5	1004.9	743.5	595.8	519.5	446.5	436.7	452.9	456.2
62.5°	18400.4	13806.0	2295.6	1092.6	792.3	600.7	509.8	438.3	410.7	410.7	414.0
65°	19960.5	14398.5	2123.5	1165.6	832.8	595.8	498.4	430.2	391.3	373.4	375.0
67.5°	18637.4	12663.0	1819.9	1180.3	831.2	573.1	480.5	415.6	371.8	344.2	342.6
69°	16979.8	10925.9	1683.5	1141.3	792.3	543.9	457.8	399.4	357.2	327.9	326.3
70°	15643.7	9865.8	1594.2	1099.1	750.0	522.8	440.0	384.8	345.8	318.2	315.0
72.5°	11374.0	6464.6	1362.1	944.9	618.5	438.3	379.9	337.7	308.5	292.2	289.0
75°	5683.8	3083.0	1105.6	766.3	474.1	350.7	311.7	282.5	267.9	264.6	263.0
77.5°	1867.0	1412.4	790.6	571.5	352.3	274.4	251.6	230.5	227.3	237.0	233.8
80°	1026.0	821.5	501.7	378.3	240.3	201.3	198.1	186.7	191.6	207.8	204.6
82.5°	522.8	427.0	310.1	227.3	162.3	144.5	157.5	151.0	157.5	172.1	170.5
85°	258.1	233.8	196.4	138.0	107.1	92.5	112.0	116.9	120.1	131.5	131.5
87.5°	149.4	138.0	103.9	64.9	53.6	48.7	64.9	63.3	74.7	81.2	79.5
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)