

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: P301941

Luminaire Tested: **GLNA-AF-04-LED-E1-SL4-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301941
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
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-SL4-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11664.4 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G3

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

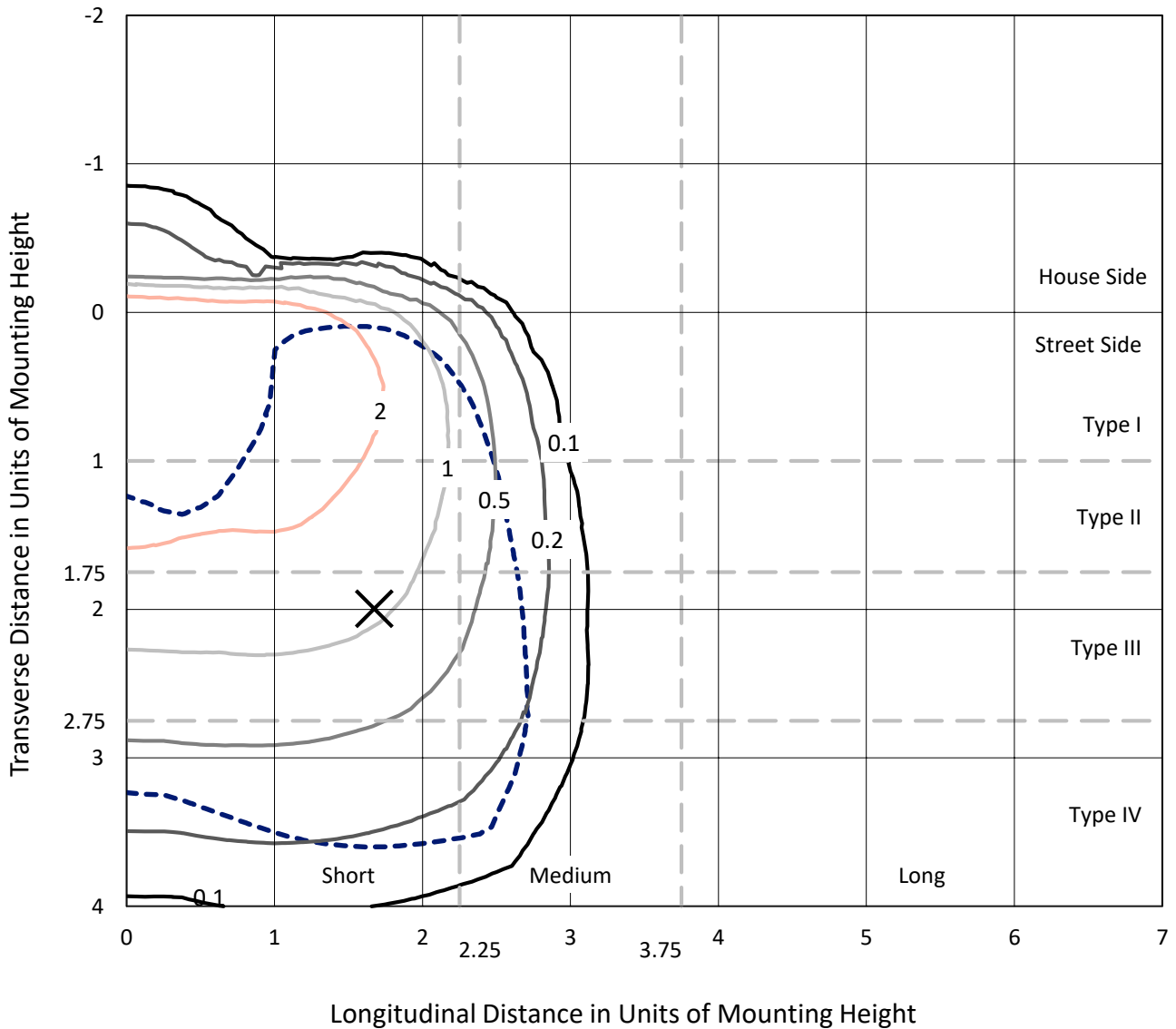


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

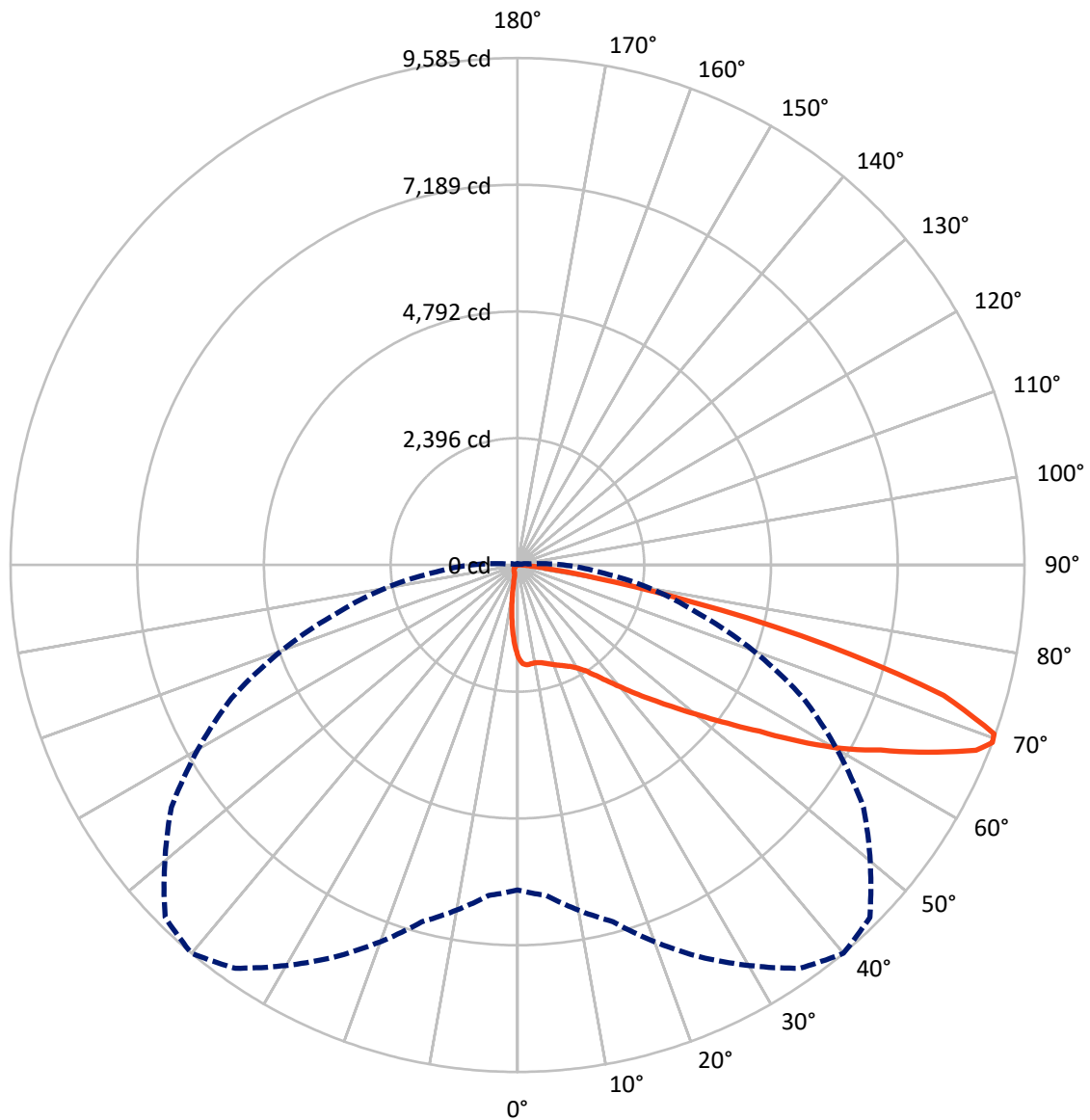


Based on 20 foot mounting height. Maximum calculated value = 4.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	682.4	0.0	682.4
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	10981.9	0.0	10981.9
	% Fixture	94.1	0.0	94.1
Total	Lumens	11664.4	0.0	11664.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.3	1.2
10°-20°	347.5	3.0
20°-30°	585.3	5.0
30°-40°	958.1	8.2
40°-50°	1659.0	14.2
50°-60°	2613.0	22.4
60°-70°	3412.5	29.3
70°-80°	1757.6	15.1
80°-90°	190.1	1.6
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°	11664.4	100.0
0°-180°	11664.4	100.0



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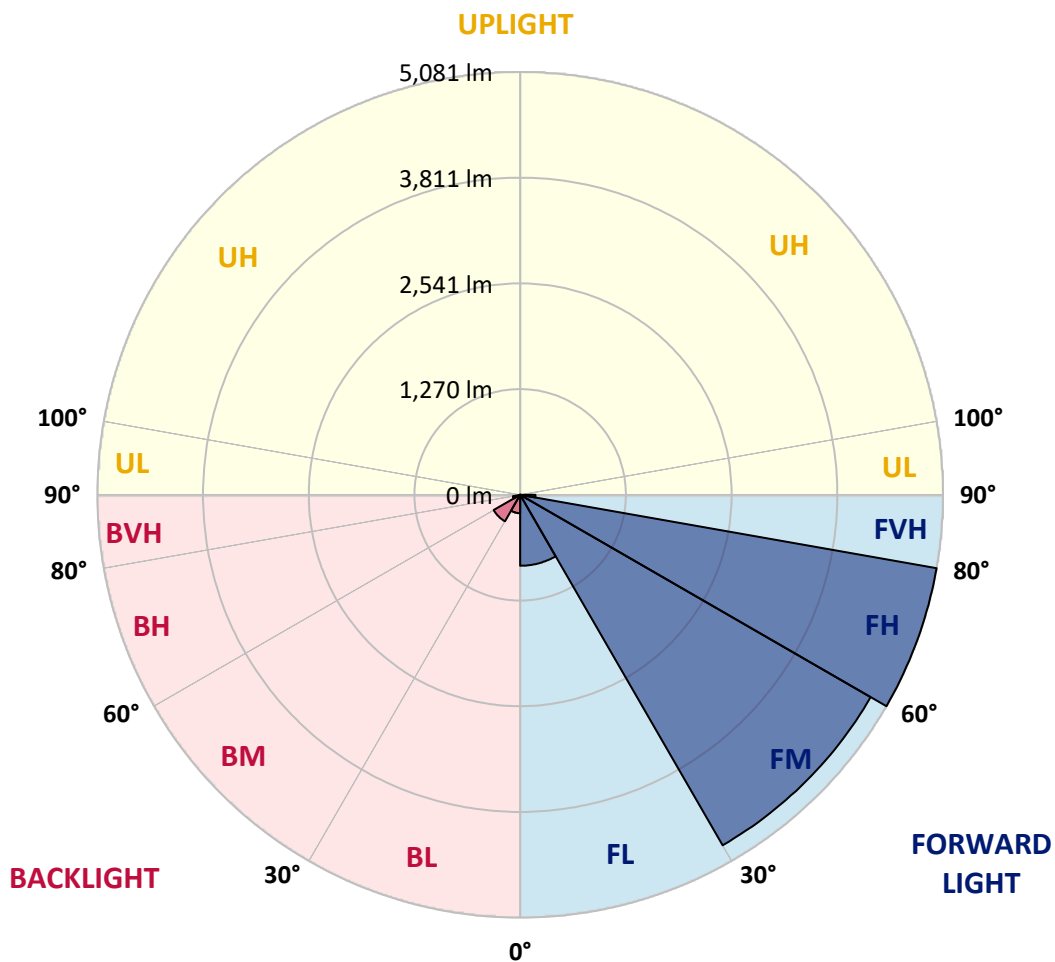
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	853.0	7.3			
FM	(30°-60°)	4863.3	41.7			
FH	(60°-80°)	5081.5	43.6			G3/7500
FVH	(80°-90°)	184.2	1.6			G2/225
BL	(0°-30°)	221.1	1.9	B1/500		
BM	(30°-60°)	366.8	3.1	B1/1000		
BH	(60°-80°)	88.6	0.8	B0/110		G0/110
BVH	(80°-90°)	6.0	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7
2.5°	1913.5	1903.1	1896.9	1888.5	1878.1	1869.1	1865.6	1839.9	1815.6	1782.3	1744.1
5°	1948.9	1945.5	1934.3	1923.2	1910.7	1896.9	1889.2	1858.7	1824.0	1775.3	1708.7
7.5°	1952.4	1948.2	1934.3	1919.1	1901.7	1885.0	1871.9	1841.3	1809.4	1760.1	1678.8
10°	1946.8	1942.0	1931.6	1914.9	1893.4	1877.4	1864.2	1835.1	1808.0	1763.5	1673.3
12.5°	1940.6	1935.7	1930.9	1922.5	1903.8	1892.7	1881.6	1853.8	1829.5	1792.0	1693.4
15°	1946.8	1944.1	1949.6	1946.1	1935.7	1926.0	1914.9	1889.9	1867.7	1836.4	1730.2
17.5°	1973.2	1973.2	1990.6	1992.7	1982.9	1969.1	1953.1	1928.1	1909.4	1883.0	1774.0
20°	2035.0	2032.9	2055.2	2059.3	2035.7	2014.2	1990.6	1960.0	1945.5	1928.8	1817.0
22.5°	2141.2	2131.5	2144.7	2140.6	2094.0	2060.7	2031.5	1994.1	1986.4	1978.8	1864.9
25°	2279.4	2273.9	2282.9	2241.9	2160.0	2114.9	2080.2	2037.8	2037.8	2045.4	1919.1
27.5°	2480.1	2459.2	2428.7	2356.5	2233.6	2176.0	2138.5	2093.3	2105.1	2133.6	1990.6
30°	2685.6	2662.7	2592.6	2481.5	2323.2	2262.8	2219.0	2171.8	2199.6	2251.6	2086.4
32.5°	2888.3	2862.6	2763.4	2623.1	2451.6	2391.2	2348.8	2296.8	2343.3	2430.8	2226.6
35°	3084.8	3061.9	2947.3	2782.1	2622.4	2572.4	2533.5	2488.4	2548.1	2670.3	2424.5
37.5°	3305.6	3280.6	3141.1	2961.9	2830.0	2793.9	2765.4	2720.3	2824.4	3003.6	2700.2
40°	3577.1	3534.7	3346.6	3168.1	3070.2	3052.9	3033.4	3027.2	3189.0	3436.8	3067.5
42.5°	3888.1	3818.7	3561.8	3385.5	3334.1	3346.6	3341.7	3369.5	3645.1	3975.6	3514.6
45°	4199.2	4109.6	3801.3	3617.4	3624.3	3668.0	3695.1	3806.2	4216.5	4593.5	3995.7
47.5°	4463.0	4374.8	4031.2	3868.0	3951.3	4037.4	4111.0	4321.4	4803.9	5201.8	4370.0
50°	4688.7	4605.4	4274.9	4143.6	4331.1	4470.0	4589.4	4901.1	5435.7	5664.9	4632.4
52.5°	4873.4	4817.8	4527.6	4459.5	4765.0	4968.5	5143.4	5517.0	5995.4	6041.2	4836.6
55°	5053.2	5013.6	4799.1	4835.2	5274.7	5551.7	5773.2	6170.3	6477.2	6355.0	5032.4
57.5°	5260.1	5224.0	5108.7	5311.5	5944.7	6293.2	6534.8	6749.4	6901.4	6675.8	5217.0
60°	5471.2	5450.3	5453.1	5840.5	6714.0	7048.6	7181.9	7237.5	7318.0	6977.8	5227.5
62.5°	5672.5	5712.1	5846.8	6429.3	7450.6	7707.5	7774.9	7829.7	7735.3	7025.7	4829.6
65°	6013.4	6078.0	6399.4	7217.3	8260.9	8535.8	8605.3	8417.1	7801.3	6406.4	3928.4
67.5°	6180.0	6298.1	6871.6	7951.9	9046.8	9352.3	9326.7	8455.3	7000.7	4885.2	2521.0
69°	6145.3	6271.0	6980.6	8176.9	9307.9	9584.9	9421.8	7988.0	5964.1	3538.9	1547.6
70°	6007.9	6134.9	6924.3	8168.5	9341.2	9560.6	9245.4	7411.1	5042.8	2587.7	967.9
72.5°	5017.1	5126.8	6147.4	7383.3	8605.3	8426.8	7734.6	5134.4	2457.2	704.7	218.0
75°	3088.3	3149.4	4410.9	5562.1	6499.4	6041.2	5153.2	2554.4	732.5	199.3	120.8
77.5°	1631.6	1659.4	2414.8	3278.5	4120.0	3409.1	2641.2	996.3	337.4	125.0	87.5
80°	964.4	985.2	1300.4	1499.0	1783.0	1489.3	1056.0	611.7	241.6	78.5	77.8
82.5°	552.0	565.2	942.9	833.2	702.6	599.9	525.6	579.7	145.1	52.8	80.5
85°	202.7	205.5	530.5	633.9	418.0	248.6	261.1	480.5	38.9	33.3	63.2
87.5°	94.4	92.3	272.9	388.1	244.4	157.6	203.4	105.5	15.3	21.5	17.4
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°	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7	1742.7
2.5°	1721.9	1696.2	1649.7	1601.8	1553.2	1515.7	1478.9	1449.7	1440.0	1421.9	1423.3
5°	1669.1	1621.9	1524.7	1426.1	1323.4	1238.6	1158.8	1094.2	1063.0	1031.0	1031.0
7.5°	1623.3	1554.6	1402.5	1242.1	1076.2	936.6	811.0	716.5	664.5	622.8	622.1
10°	1605.9	1512.9	1300.4	1070.6	839.4	649.2	499.9	404.1	354.8	322.9	321.5
12.5°	1613.6	1498.3	1222.0	912.3	622.1	417.3	289.5	227.7	206.9	197.2	197.2
15°	1635.8	1494.2	1143.5	757.5	439.5	261.1	192.3	175.7	174.3	174.3	174.3
17.5°	1662.9	1495.5	1063.0	606.8	299.2	186.8	165.9	163.9	165.2	165.2	165.2
20°	1690.6	1496.2	976.2	467.3	211.1	162.5	156.2	155.5	156.9	156.9	157.6
22.5°	1724.7	1499.7	889.4	349.2	174.3	153.4	148.6	148.6	149.3	149.3	148.6
25°	1763.5	1506.7	799.1	259.0	159.0	147.2	143.0	142.3	143.0	142.3	141.6
27.5°	1812.1	1516.4	698.5	202.7	152.1	140.9	137.5	137.5	136.8	136.1	135.4
30°	1873.2	1527.5	585.3	172.2	145.1	135.4	131.9	131.2	130.5	129.1	129.1
32.5°	1966.3	1551.8	473.5	156.2	137.5	127.8	125.0	125.0	123.6	122.2	121.5
35°	2109.3	1599.7	373.5	146.5	129.1	119.4	115.9	115.9	114.6	113.9	113.2
37.5°	2307.2	1672.6	290.2	137.5	120.8	110.4	106.9	106.2	104.8	103.5	102.8
40°	2570.3	1762.9	228.4	129.1	112.5	101.4	98.6	97.2	94.4	92.3	92.3
42.5°	2900.8	1865.6	185.4	120.1	102.8	93.0	91.0	88.9	84.0	81.9	81.2
45°	3246.6	1958.0	156.9	109.7	93.0	84.7	83.3	79.8	73.6	71.5	71.5
47.5°	3495.8	1979.5	138.2	100.0	84.0	75.7	75.0	68.7	63.2	61.8	61.1
50°	3651.4	1937.1	122.9	90.3	75.7	67.3	65.3	57.6	54.2	52.8	52.1
52.5°	3756.2	1861.4	110.4	81.9	68.0	59.7	54.9	49.3	46.5	45.1	45.1
55°	3840.2	1754.5	97.9	74.3	61.8	53.5	46.5	42.4	39.6	38.2	38.2
57.5°	3863.8	1609.4	85.4	68.0	55.5	47.2	39.6	36.8	33.3	32.6	32.6
60°	3692.3	1347.7	75.7	60.4	50.0	41.0	34.7	31.2	27.8	27.1	26.4
62.5°	3240.3	1042.9	66.7	53.5	43.7	35.4	29.9	25.7	22.9	22.9	22.9
65°	2471.7	699.2	58.3	46.5	38.2	29.9	25.7	20.8	19.4	19.4	20.1
67.5°	1479.6	380.5	50.0	39.6	32.6	25.0	21.5	18.1	17.4	18.1	18.1
69°	867.2	223.6	45.1	35.4	28.5	22.2	18.7	16.0	17.4	18.1	18.1
70°	535.3	150.7	41.7	31.9	25.7	20.1	17.4	15.3	16.7	17.4	17.4
72.5°	149.3	77.8	33.3	25.0	20.8	16.7	13.9	13.9	16.0	16.7	16.7
75°	97.2	57.6	25.7	18.7	16.0	13.2	11.8	13.2	15.3	16.0	16.0
77.5°	80.5	47.2	20.8	15.3	13.2	12.5	11.1	11.8	13.9	14.6	14.6
80°	73.6	33.3	16.7	13.9	11.8	11.1	10.4	9.7	12.5	13.2	13.2
82.5°	70.1	26.4	14.6	12.5	11.1	9.7	9.0	9.7	11.1	11.8	12.5
85°	43.7	17.4	13.2	11.8	9.7	9.0	9.0	9.0	10.4	11.1	11.1
87.5°	16.0	13.9	11.8	9.7	8.3	8.3	8.3	8.3	9.0	10.4	10.4
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)