

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: P301812

Luminaire Tested: **GLNA-AF-03-LED-E1-SL4-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301812
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-03-LED-E1-SL4-7027-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 2700K CCT 1050mA 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: 11643 lumens
Efficiency: N/A
Efficacy: 70.1 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): 166
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

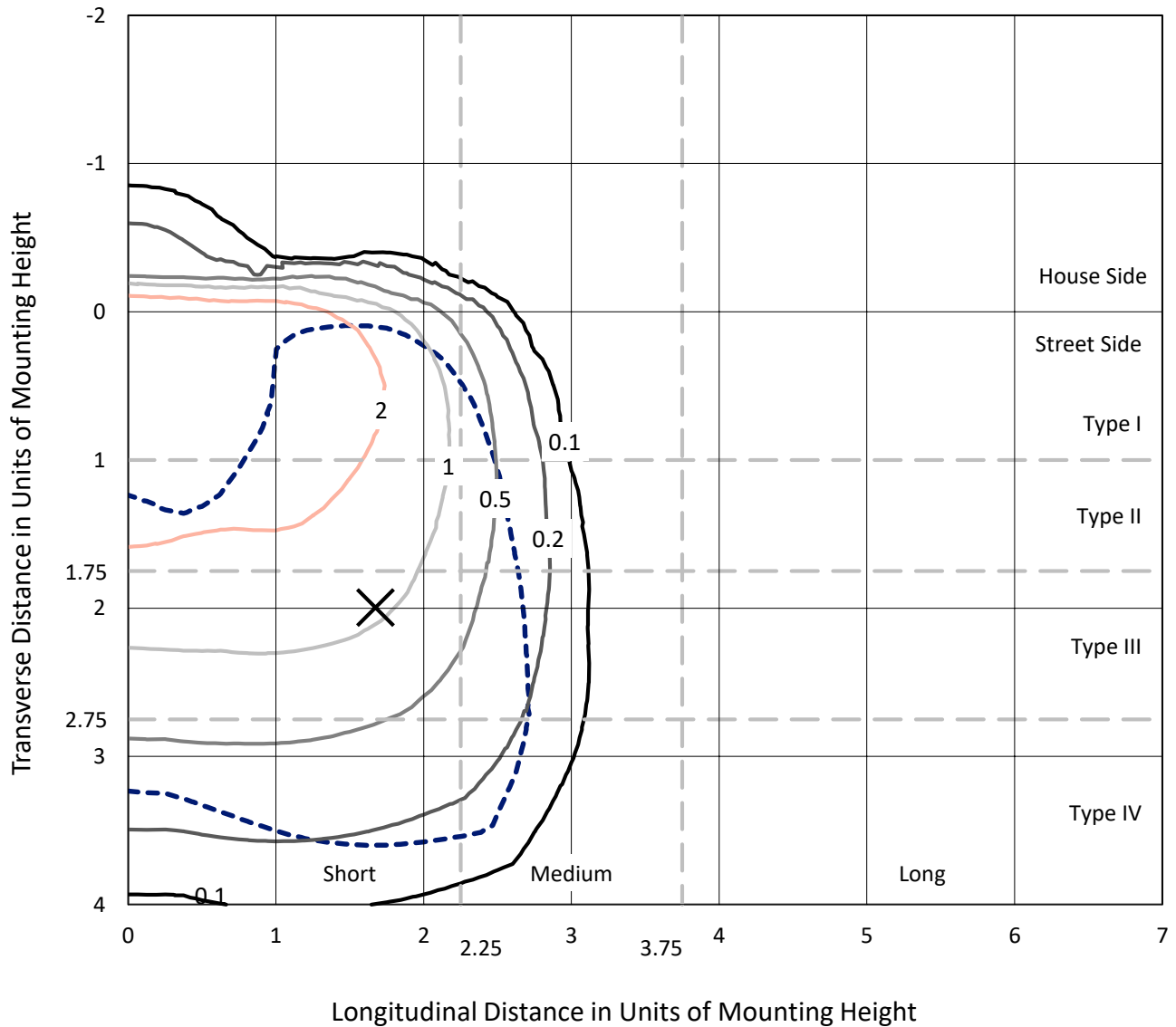


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

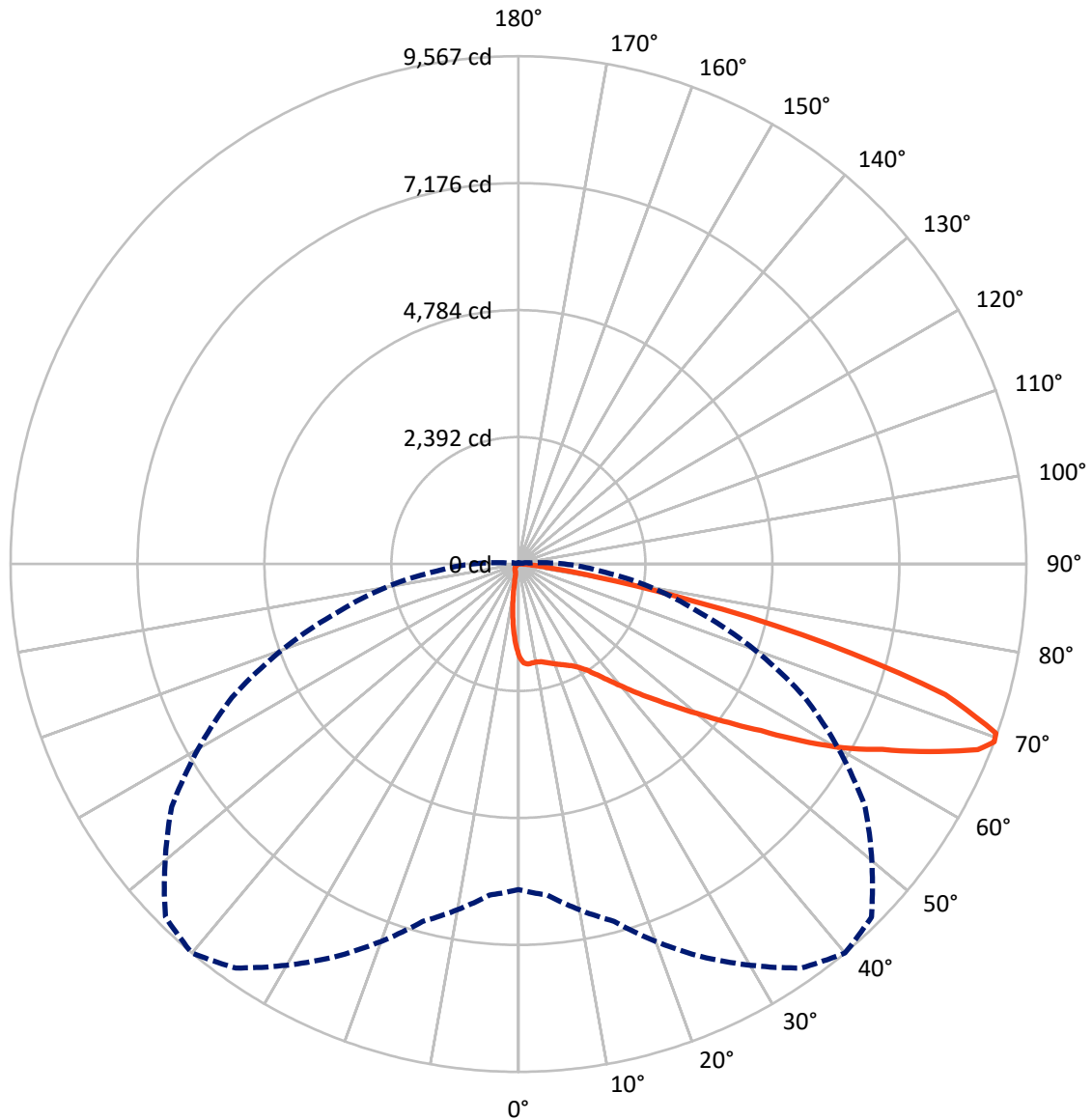


Based on 20 foot mounting height. Maximum calculated value = 4.8 fc
 Type IV - Short - Semi-Cutoff

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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	681.2	0.0	681.2
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	10961.8	0.0	10961.8
	% Fixture	94.1	0.0	94.1
Total	Lumens	11643.0	0.0	11643.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.0	1.2
10°-20°	346.8	3.0
20°-30°	584.2	5.0
30°-40°	956.4	8.2
40°-50°	1655.9	14.2
50°-60°	2608.2	22.4
60°-70°	3406.2	29.3
70°-80°	1754.4	15.1
80°-90°	189.8	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°	11643.0	100.0
0°-180°	11643.0	100.0

Coefficient of Utilization



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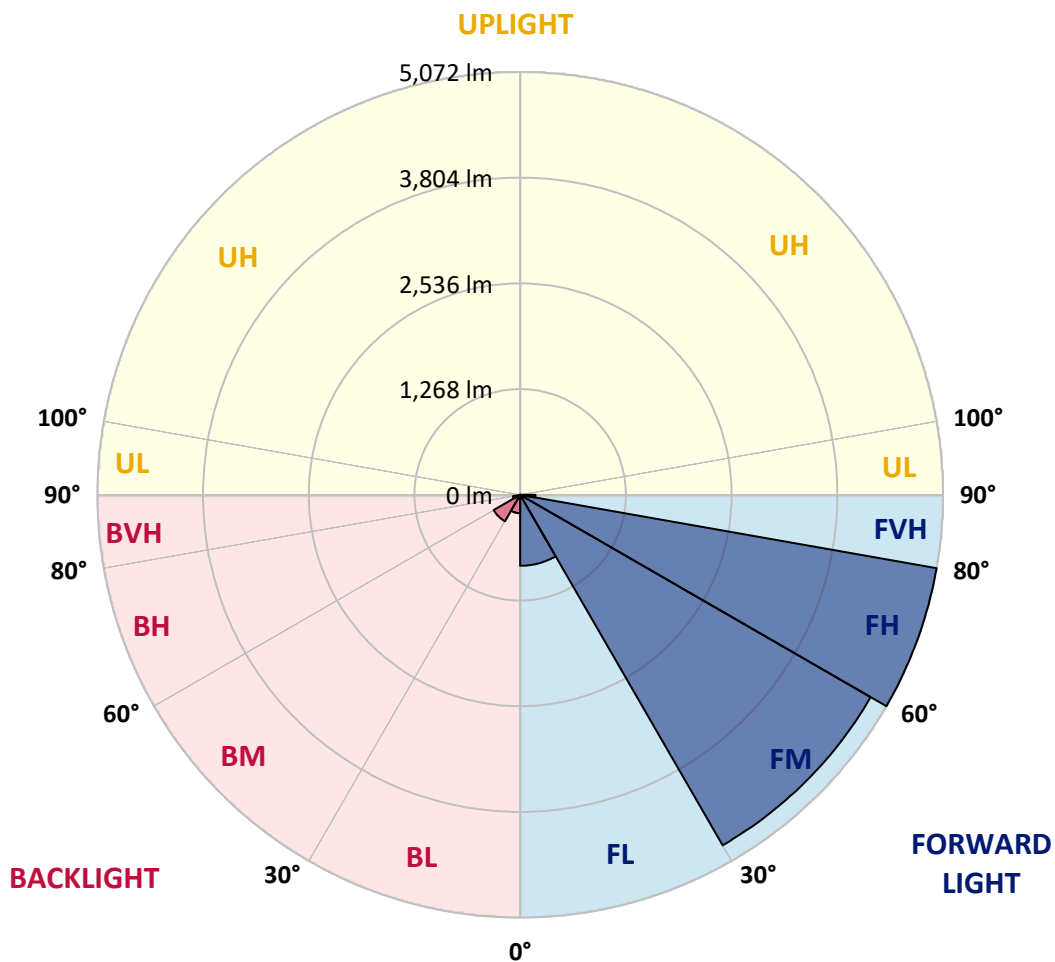
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	851.4	7.3			
FM	(30°-60°)	4854.4	41.7			
FH	(60°-80°)	5072.2	43.6			G3/7500
FVH	(80°-90°)	183.8	1.6			G2/225
BL	(0°-30°)	220.7	1.9	B1/500		
BM	(30°-60°)	366.1	3.1	B1/1000		
BH	(60°-80°)	88.4	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°	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5
2.5°	1910.0	1899.6	1893.4	1885.1	1874.7	1865.7	1862.2	1836.5	1812.3	1779.0	1740.9
5°	1945.4	1941.9	1930.8	1919.7	1907.2	1893.4	1885.8	1855.3	1820.6	1772.1	1705.6
7.5°	1948.8	1944.7	1930.8	1915.6	1898.2	1881.6	1868.4	1837.9	1806.1	1756.8	1675.8
10°	1943.3	1938.4	1928.0	1911.4	1889.9	1874.0	1860.8	1831.7	1804.7	1760.3	1670.2
12.5°	1937.0	1932.2	1927.3	1919.0	1900.3	1889.2	1878.1	1850.4	1826.2	1788.7	1690.3
15°	1943.3	1940.5	1946.0	1942.6	1932.2	1922.5	1911.4	1886.4	1864.3	1833.1	1727.0
17.5°	1969.6	1969.6	1986.9	1989.0	1979.3	1965.5	1949.5	1924.6	1905.9	1879.5	1770.7
20°	2031.3	2029.2	2051.4	2055.5	2032.0	2010.5	1986.9	1956.4	1941.9	1925.3	1813.7
22.5°	2137.3	2127.6	2140.8	2136.6	2090.2	2056.9	2027.8	1990.4	1982.8	1975.2	1861.5
25°	2275.2	2269.7	2278.7	2237.8	2156.0	2111.0	2076.3	2034.1	2034.1	2041.7	1915.6
27.5°	2475.5	2454.7	2424.2	2352.2	2229.5	2172.0	2134.6	2089.5	2101.3	2129.7	1986.9
30°	2680.7	2657.8	2587.8	2476.9	2318.9	2258.6	2214.9	2167.8	2195.5	2247.5	2082.6
32.5°	2883.0	2857.4	2758.3	2618.3	2447.1	2386.8	2344.5	2292.6	2339.0	2426.3	2222.6
35°	3079.2	3056.3	2941.9	2777.0	2617.6	2567.7	2528.9	2483.8	2543.4	2665.4	2420.1
37.5°	3299.5	3274.6	3135.3	2956.5	2824.8	2788.8	2760.4	2715.3	2819.3	2998.1	2695.2
40°	3570.5	3528.2	3340.4	3162.3	3064.6	3047.3	3027.9	3021.6	3183.1	3430.5	3061.8
42.5°	3881.0	3811.7	3555.3	3379.2	3328.0	3340.4	3335.6	3363.3	3638.4	3968.3	3508.2
45°	4191.5	4102.1	3794.4	3610.7	3617.7	3661.3	3688.3	3799.2	4208.8	4585.1	3988.4
47.5°	4454.8	4366.8	4023.8	3860.9	3944.1	4030.0	4103.5	4313.5	4795.1	5192.2	4362.0
50°	4680.1	4596.9	4267.0	4136.0	4323.2	4461.8	4581.0	4892.1	5425.8	5654.5	4623.9
52.5°	4864.4	4809.0	4519.3	4451.4	4756.3	4959.4	5134.0	5506.9	5984.4	6030.1	4827.7
55°	5043.9	5004.4	4790.3	4826.3	5265.0	5541.5	5762.6	6159.0	6465.3	6343.4	5023.1
57.5°	5250.4	5214.4	5099.4	5301.7	5933.8	6281.7	6522.9	6737.0	6888.8	6663.5	5207.5
60°	5461.1	5440.3	5443.1	5829.8	6701.7	7035.7	7168.8	7224.2	7304.6	6965.0	5217.9
62.5°	5662.1	5701.6	5836.1	6417.5	7437.0	7693.4	7760.6	7815.4	7721.1	7012.8	4820.8
65°	6002.4	6066.8	6387.7	7204.1	8245.7	8520.2	8589.5	8401.7	7787.0	6394.6	3921.2
67.5°	6168.7	6286.5	6859.0	7937.3	9030.3	9335.2	9309.6	8439.8	6987.9	4876.2	2516.4
69°	6134.1	6259.5	6967.8	8161.9	9290.8	9567.4	9404.5	7973.4	5953.2	3532.4	1544.8
70°	5996.8	6123.7	6911.7	8153.6	9324.1	9543.1	9228.5	7397.5	5033.5	2582.9	966.1
72.5°	5007.9	5117.4	6136.1	7369.8	8589.5	8411.4	7720.4	5125.0	2452.7	703.4	217.6
75°	3082.6	3143.6	4402.9	5551.9	6487.5	6030.1	5143.7	2549.7	731.2	198.9	120.6
77.5°	1628.6	1656.4	2410.4	3272.5	4112.5	3402.8	2636.3	994.5	336.8	124.7	87.3
80°	962.6	983.4	1298.1	1496.3	1779.7	1486.6	1054.1	610.6	241.2	78.3	77.6
82.5°	551.0	564.1	941.1	831.6	701.4	598.8	524.6	578.7	144.8	52.7	80.4
85°	202.4	205.1	529.5	632.7	417.2	248.1	260.6	479.6	38.8	33.3	63.1
87.5°	94.3	92.2	272.4	387.4	243.9	157.3	203.1	105.3	15.2	21.5	17.3
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°	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5	1739.5
2.5°	1718.7	1693.1	1646.7	1598.8	1550.3	1512.9	1476.2	1447.1	1437.4	1419.3	1420.7
5°	1666.1	1618.9	1521.9	1423.5	1320.9	1236.4	1156.7	1092.2	1061.0	1029.2	1029.2
7.5°	1620.3	1551.7	1399.9	1239.8	1074.2	934.9	809.5	715.2	663.2	621.7	621.0
10°	1603.0	1510.1	1298.1	1068.7	837.9	648.0	499.0	403.3	354.1	322.3	320.9
12.5°	1610.6	1495.6	1219.7	910.6	621.0	416.5	289.0	227.3	206.5	196.8	196.8
15°	1632.8	1491.4	1141.4	756.1	438.7	260.6	192.0	175.3	174.0	174.0	174.0
17.5°	1659.8	1492.8	1061.0	605.7	298.7	186.4	165.6	163.6	164.9	164.9	164.9
20°	1687.5	1493.5	974.4	466.4	210.7	162.2	155.9	155.2	156.6	156.6	157.3
22.5°	1721.5	1497.0	887.8	348.6	174.0	153.2	148.3	148.3	149.0	149.0	148.3
25°	1760.3	1503.9	797.7	258.5	158.7	146.9	142.8	142.1	142.8	142.1	141.4
27.5°	1808.8	1513.6	697.2	202.4	151.8	140.7	137.2	137.2	136.5	135.8	135.1
30°	1869.8	1524.7	584.2	171.9	144.8	135.1	131.7	131.0	130.3	128.9	128.9
32.5°	1962.7	1548.9	472.7	155.9	137.2	127.5	124.7	124.7	123.4	122.0	121.3
35°	2105.4	1596.8	372.9	146.2	128.9	119.2	115.7	115.7	114.4	113.7	113.0
37.5°	2303.0	1669.5	289.7	137.2	120.6	110.2	106.7	106.0	104.6	103.3	102.6
40°	2565.6	1759.6	228.0	128.9	112.3	101.2	98.4	97.0	94.3	92.2	92.2
42.5°	2895.5	1862.2	185.0	119.9	102.6	92.9	90.8	88.7	83.9	81.8	81.1
45°	3240.6	1954.4	156.6	109.5	92.9	84.6	83.2	79.7	73.5	71.4	71.4
47.5°	3489.4	1975.8	137.9	99.8	83.9	75.5	74.8	68.6	63.1	61.7	61.0
50°	3644.7	1933.6	122.7	90.1	75.5	67.2	65.1	57.5	54.1	52.7	52.0
52.5°	3749.3	1858.0	110.2	81.8	67.9	59.6	54.7	49.2	46.4	45.0	45.0
55°	3833.2	1751.3	97.7	74.2	61.7	53.4	46.4	42.3	39.5	38.1	38.1
57.5°	3856.7	1606.5	85.2	67.9	55.4	47.1	39.5	36.7	33.3	32.6	32.6
60°	3685.6	1345.2	75.5	60.3	49.9	40.9	34.7	31.2	27.7	27.0	26.3
62.5°	3234.4	1040.9	66.5	53.4	43.7	35.3	29.8	25.6	22.9	22.9	22.9
65°	2467.2	697.9	58.2	46.4	38.1	29.8	25.6	20.8	19.4	19.4	20.1
67.5°	1476.9	379.8	49.9	39.5	32.6	24.9	21.5	18.0	17.3	18.0	18.0
69°	865.6	223.2	45.0	35.3	28.4	22.2	18.7	15.9	17.3	18.0	18.0
70°	534.3	150.4	41.6	31.9	25.6	20.1	17.3	15.2	16.6	17.3	17.3
72.5°	149.0	77.6	33.3	24.9	20.8	16.6	13.9	13.9	15.9	16.6	16.6
75°	97.0	57.5	25.6	18.7	15.9	13.2	11.8	13.2	15.2	15.9	15.9
77.5°	80.4	47.1	20.8	15.2	13.2	12.5	11.1	11.8	13.9	14.6	14.6
80°	73.5	33.3	16.6	13.9	11.8	11.1	10.4	9.7	12.5	13.2	13.2
82.5°	70.0	26.3	14.6	12.5	11.1	9.7	9.0	9.7	11.1	11.8	12.5
85°	43.7	17.3	13.2	11.8	9.7	9.0	9.0	9.0	10.4	11.1	11.1
87.5°	15.9	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)