

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: P301878

Luminaire Tested: **GLNA-AF-04-LED-E1-SL4-7027-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301878  
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-SL4-7027-800-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 2700K CCT 800mA 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: 12428.5 lumens  
Efficiency: N/A  
Efficacy: 72.7 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): 171  
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

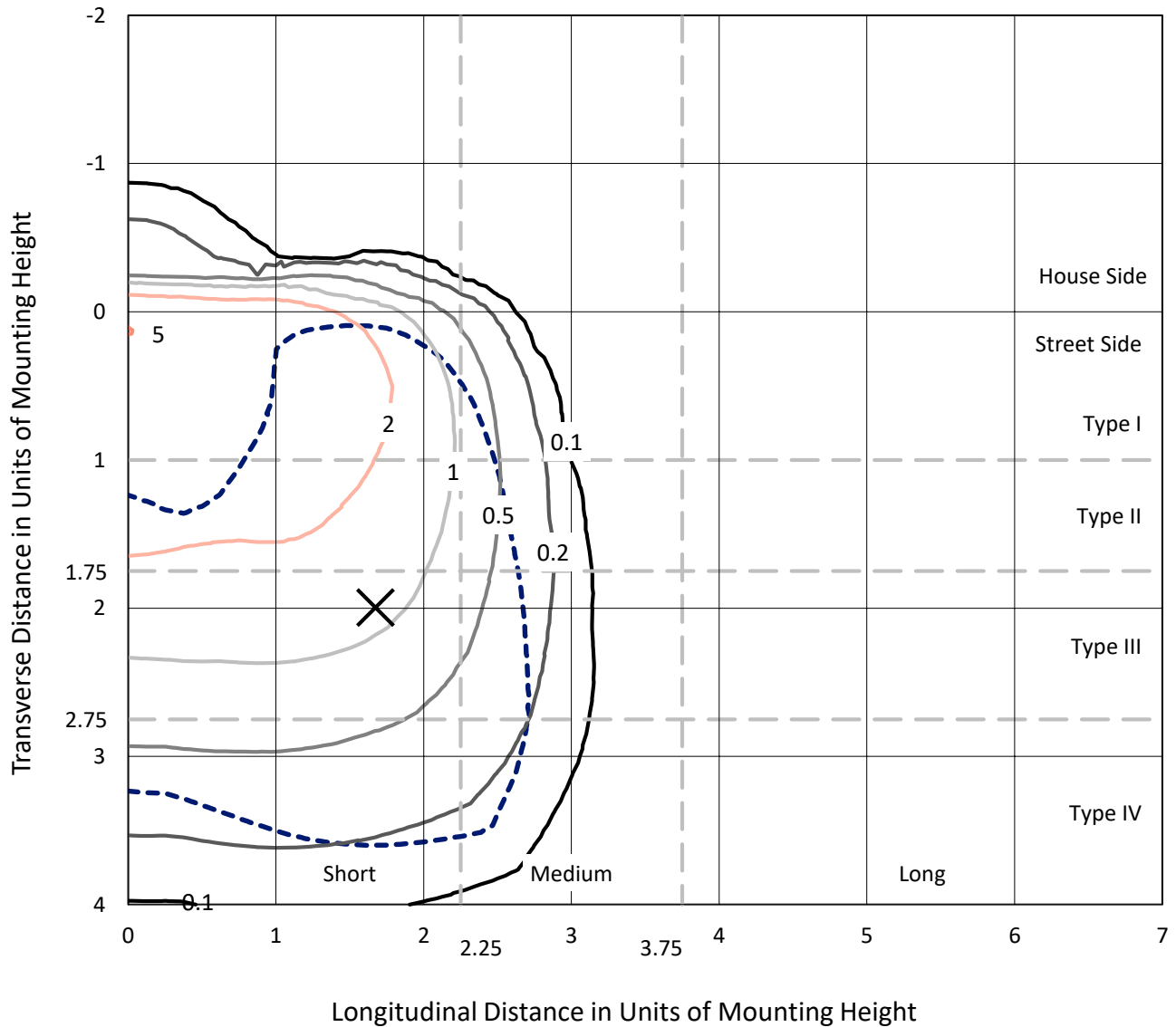


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

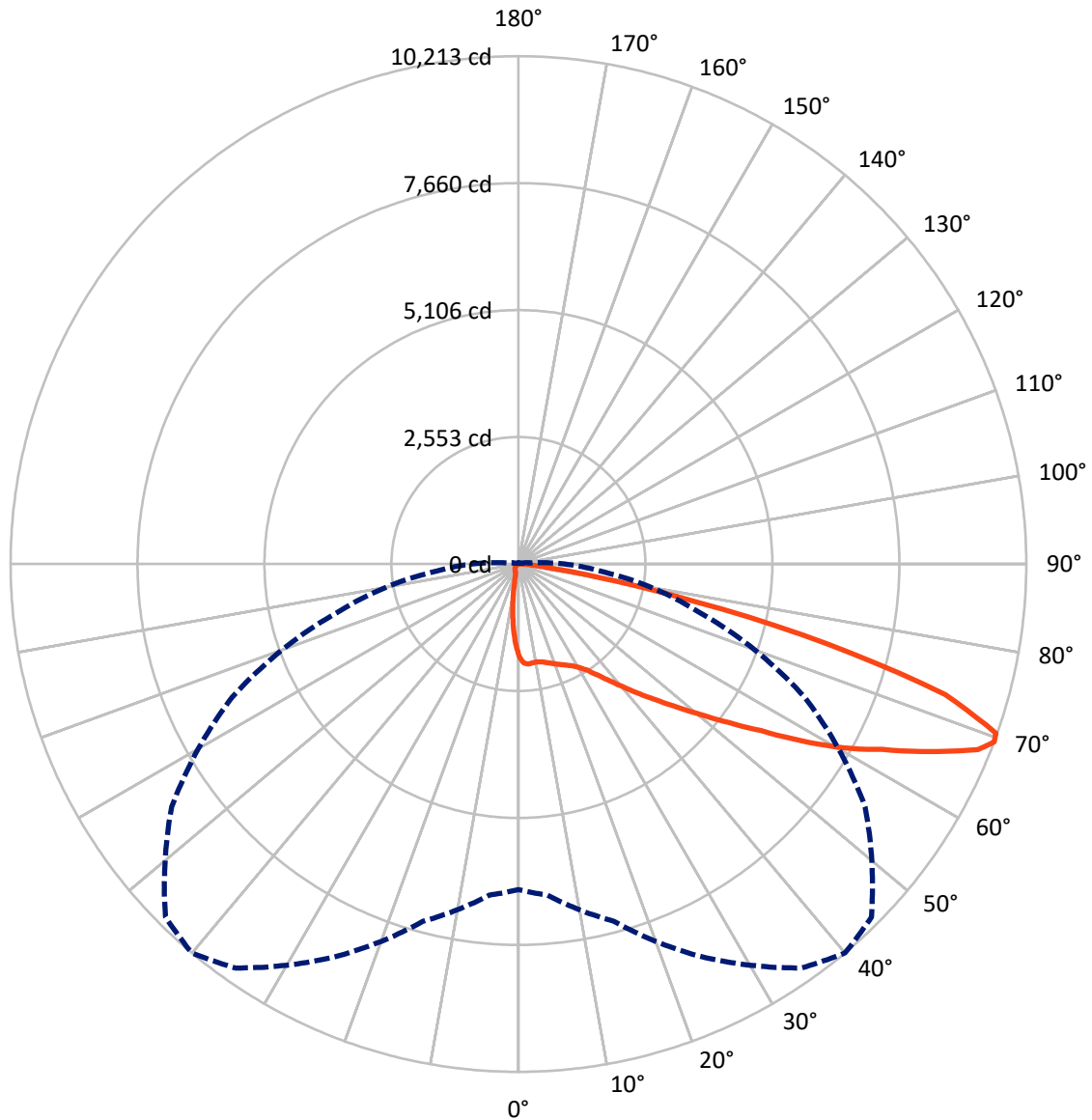


Based on 20 foot mounting height. Maximum calculated value = 5.1 fc  
 Type IV - Short - Semi-Cutoff

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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
<b>House Side</b>	Lumens	727.1	0.0	727.1
	% Fixture	5.9	0.0	5.9
<b>Street Side</b>	Lumens	11701.3	0.0	11701.3
	% Fixture	94.1	0.0	94.1
<b>Total</b>	Lumens	12428.5	0.0	12428.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.6	1.2
10°-20°	370.2	3.0
20°-30°	623.6	5.0
30°-40°	1020.9	8.2
40°-50°	1767.6	14.2
50°-60°	2784.2	22.4
60°-70°	3636.0	29.3
70°-80°	1872.7	15.1
80°-90°	202.6	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°	12428.5	100.0
0°-180°	12428.5	100.0



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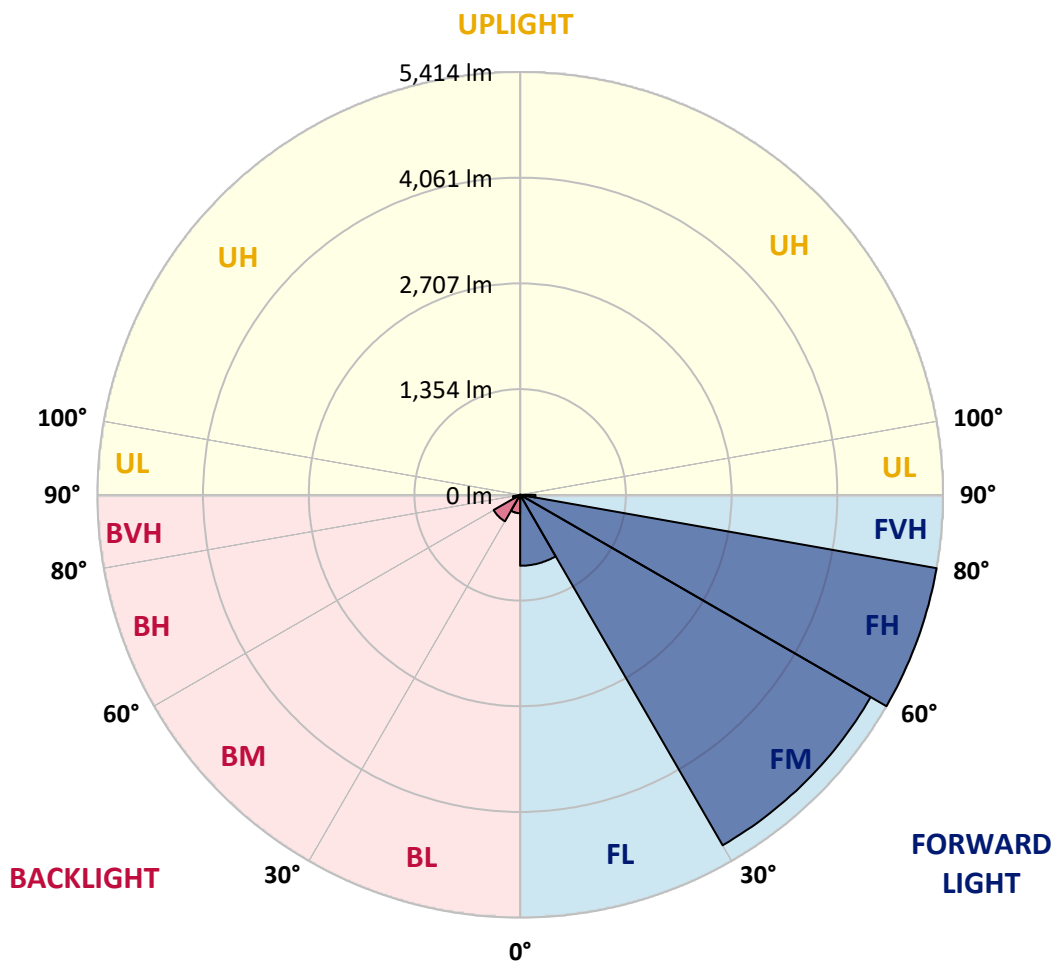
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	908.9	7.3			
FM	(30°-60°)	5181.9	41.7			
FH	(60°-80°)	5414.4	43.6			G3/7500
FVH	(80°-90°)	196.2	1.6			G2/225
BL	(0°-30°)	235.5	1.9	B1/500		
BM	(30°-60°)	390.8	3.1	B1/1000		
BH	(60°-80°)	94.4	0.8	B0/110		G0/110
BVH	(80°-90°)	6.4	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°	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9
2.5°	2038.9	2027.8	2021.1	2012.2	2001.1	1991.5	1987.8	1960.4	1934.6	1899.0	1858.4
5°	2076.6	2072.9	2061.1	2049.2	2035.9	2021.1	2013.0	1980.4	1943.4	1891.6	1820.6
7.5°	2080.3	2075.9	2061.1	2044.8	2026.3	2008.5	1994.5	1961.9	1927.9	1875.4	1788.8
10°	2074.4	2069.2	2058.1	2040.3	2017.4	2000.4	1986.3	1955.3	1926.4	1879.1	1782.9
12.5°	2067.7	2062.5	2057.4	2048.5	2028.5	2016.7	2004.8	1975.2	1949.4	1909.4	1804.4
15°	2074.4	2071.4	2077.3	2073.6	2062.5	2052.2	2040.3	2013.7	1990.0	1956.7	1843.6
17.5°	2102.5	2102.5	2121.0	2123.2	2112.8	2098.1	2081.0	2054.4	2034.4	2006.3	1890.2
20°	2168.3	2166.1	2189.8	2194.2	2169.1	2146.1	2121.0	2088.4	2072.9	2055.1	1936.0
22.5°	2281.5	2271.2	2285.2	2280.8	2231.2	2195.7	2164.6	2124.7	2116.5	2108.4	1987.1
25°	2428.7	2422.8	2432.4	2388.8	2301.5	2253.4	2216.4	2171.3	2171.3	2179.4	2044.8
27.5°	2642.5	2620.3	2587.8	2510.9	2379.9	2318.5	2278.6	2230.5	2243.0	2273.4	2121.0
30°	2861.5	2837.1	2762.4	2644.0	2475.3	2411.0	2364.4	2314.1	2343.7	2399.1	2223.1
32.5°	3077.5	3050.2	2944.4	2794.9	2612.2	2547.8	2502.7	2447.2	2496.8	2590.0	2372.5
35°	3286.9	3262.5	3140.4	2964.3	2794.2	2740.9	2699.5	2651.4	2715.0	2845.2	2583.4
37.5°	3522.1	3495.5	3346.8	3156.0	3015.4	2976.9	2946.6	2898.5	3009.5	3200.3	2877.1
40°	3811.4	3766.3	3565.8	3375.7	3271.4	3252.9	3232.2	3225.5	3397.9	3662.0	3268.4
42.5°	4142.8	4068.9	3795.1	3607.2	3552.5	3565.8	3560.6	3590.2	3883.9	4236.0	3744.8
45°	4474.3	4378.8	4050.4	3854.3	3861.7	3908.3	3937.2	4055.5	4492.8	4894.5	4257.5
47.5°	4755.4	4661.4	4295.2	4121.4	4210.2	4301.9	4380.3	4604.5	5118.6	5542.5	4656.3
50°	4995.8	4907.0	4554.9	4415.1	4614.8	4762.8	4890.0	5222.2	5791.8	6036.0	4935.9
52.5°	5192.6	5133.4	4824.2	4751.7	5077.2	5294.0	5480.4	5878.4	6388.1	6436.9	5153.4
55°	5384.2	5342.0	5113.4	5151.9	5620.2	5915.4	6151.4	6574.5	6901.5	6771.3	5362.0
57.5°	5604.7	5566.2	5443.4	5659.4	6334.1	6705.5	6962.9	7191.5	7353.5	7113.1	5558.8
60°	5829.6	5807.4	5810.3	6223.1	7153.8	7510.4	7652.4	7711.6	7797.4	7434.9	5569.9
62.5°	6044.1	6086.3	6229.8	6850.5	7938.7	8212.4	8284.2	8342.6	8242.0	7486.0	5146.0
65°	6407.3	6476.1	6818.7	7690.1	8802.0	9095.0	9169.0	8968.5	8312.3	6826.1	4185.7
67.5°	6584.9	6710.7	7321.7	8472.8	9639.5	9965.0	9937.6	9009.2	7459.3	5205.2	2686.2
69°	6547.9	6681.8	7437.9	8712.5	9917.7	10212.8	10039.0	8511.3	6354.8	3770.7	1649.0
70°	6401.4	6536.8	7377.9	8703.7	9953.2	10186.9	9851.1	7896.5	5373.1	2757.2	1031.3
72.5°	5345.7	5462.6	6550.1	7866.9	9169.0	8978.9	8241.3	5470.8	2618.1	750.9	232.3
75°	3290.6	3355.7	4699.9	5926.5	6925.2	6436.9	5490.7	2721.7	780.5	212.3	128.7
77.5°	1738.5	1768.1	2573.0	3493.3	4389.9	3632.4	2814.2	1061.6	359.5	133.2	93.2
80°	1027.6	1049.8	1385.6	1597.2	1899.8	1586.9	1125.2	651.8	257.4	83.6	82.9
82.5°	588.1	602.2	1004.6	887.8	748.7	639.2	560.0	617.7	154.6	56.2	85.8
85°	216.0	219.0	565.2	675.4	445.4	264.8	278.2	511.9	41.4	35.5	67.3
87.5°	100.6	98.4	290.7	413.5	260.4	167.9	216.8	112.4	16.3	22.9	18.5
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°	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9	1856.9
2.5°	1834.7	1807.3	1757.7	1706.7	1654.9	1615.0	1575.8	1544.7	1534.3	1515.1	1516.6
5°	1778.5	1728.2	1624.6	1519.5	1410.0	1319.8	1234.7	1165.9	1132.6	1098.6	1098.6
7.5°	1729.6	1656.4	1494.4	1323.5	1146.7	998.0	864.1	763.5	708.0	663.6	662.9
10°	1711.1	1612.0	1385.6	1140.8	894.4	691.7	532.7	430.6	378.0	344.0	342.5
12.5°	1719.3	1596.5	1302.0	972.1	662.9	444.6	308.5	242.7	220.5	210.1	210.1
15°	1743.0	1592.0	1218.4	807.1	468.3	278.2	204.9	187.2	185.7	185.7	185.7
17.5°	1771.8	1593.5	1132.6	646.6	318.9	199.0	176.8	174.6	176.1	176.1	176.1
20°	1801.4	1594.3	1040.1	497.9	224.9	173.1	166.5	165.7	167.2	167.2	167.9
22.5°	1837.6	1598.0	947.7	372.1	185.7	163.5	158.3	158.3	159.1	159.1	158.3
25°	1879.1	1605.3	851.5	275.9	169.4	156.8	152.4	151.7	152.4	151.7	150.9
27.5°	1930.9	1615.7	744.2	216.0	162.0	150.2	146.5	146.5	145.7	145.0	144.3
30°	1996.0	1627.5	623.6	183.5	154.6	144.3	140.6	139.8	139.1	137.6	137.6
32.5°	2095.1	1653.4	504.5	166.5	146.5	136.1	133.2	133.2	131.7	130.2	129.5
35°	2247.5	1704.5	398.0	156.1	137.6	127.2	123.5	123.5	122.1	121.3	120.6
37.5°	2458.3	1782.2	309.2	146.5	128.7	117.6	113.9	113.2	111.7	110.2	109.5
40°	2738.7	1878.3	243.4	137.6	119.8	108.0	105.1	103.6	100.6	98.4	98.4
42.5°	3090.9	1987.8	197.5	128.0	109.5	99.1	96.9	94.7	89.5	87.3	86.6
45°	3459.3	2086.2	167.2	116.9	99.1	90.3	88.8	85.1	78.4	76.2	76.2
47.5°	3724.9	2109.1	147.2	106.5	89.5	80.6	79.9	73.2	67.3	65.8	65.1
50°	3890.6	2064.0	130.9	96.2	80.6	71.8	69.5	61.4	57.7	56.2	55.5
52.5°	4002.3	1983.4	117.6	87.3	72.5	63.6	58.4	52.5	49.6	48.1	48.1
55°	4091.8	1869.5	104.3	79.2	65.8	57.0	49.6	45.1	42.2	40.7	40.7
57.5°	4116.9	1714.8	91.0	72.5	59.2	50.3	42.2	39.2	35.5	34.8	34.8
60°	3934.2	1435.9	80.6	64.4	53.3	43.6	37.0	33.3	29.6	28.9	28.1
62.5°	3452.6	1111.2	71.0	57.0	46.6	37.7	31.8	27.4	24.4	24.4	24.4
65°	2633.7	745.0	62.1	49.6	40.7	31.8	27.4	22.2	20.7	20.7	21.5
67.5°	1576.5	405.4	53.3	42.2	34.8	26.6	22.9	19.2	18.5	19.2	19.2
69°	924.0	238.2	48.1	37.7	30.3	23.7	20.0	17.0	18.5	19.2	19.2
70°	570.4	160.5	44.4	34.0	27.4	21.5	18.5	16.3	17.8	18.5	18.5
72.5°	159.1	82.9	35.5	26.6	22.2	17.8	14.8	14.8	17.0	17.8	17.8
75°	103.6	61.4	27.4	20.0	17.0	14.1	12.6	14.1	16.3	17.0	17.0
77.5°	85.8	50.3	22.2	16.3	14.1	13.3	11.8	12.6	14.8	15.5	15.5
80°	78.4	35.5	17.8	14.8	12.6	11.8	11.1	10.4	13.3	14.1	14.1
82.5°	74.7	28.1	15.5	13.3	11.8	10.4	9.6	10.4	11.8	12.6	13.3
85°	46.6	18.5	14.1	12.6	10.4	9.6	9.6	9.6	11.1	11.8	11.8
87.5°	17.0	14.8	12.6	10.4	8.9	8.9	8.9	8.9	9.6	11.1	11.1
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)