

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: P301816

Luminaire Tested: **GLNA-AF-03-LED-E1-SL4-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301816
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-SL4-7050-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 5000K 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: 13400.6 lumens
Efficiency: N/A
Efficacy: 80.7 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

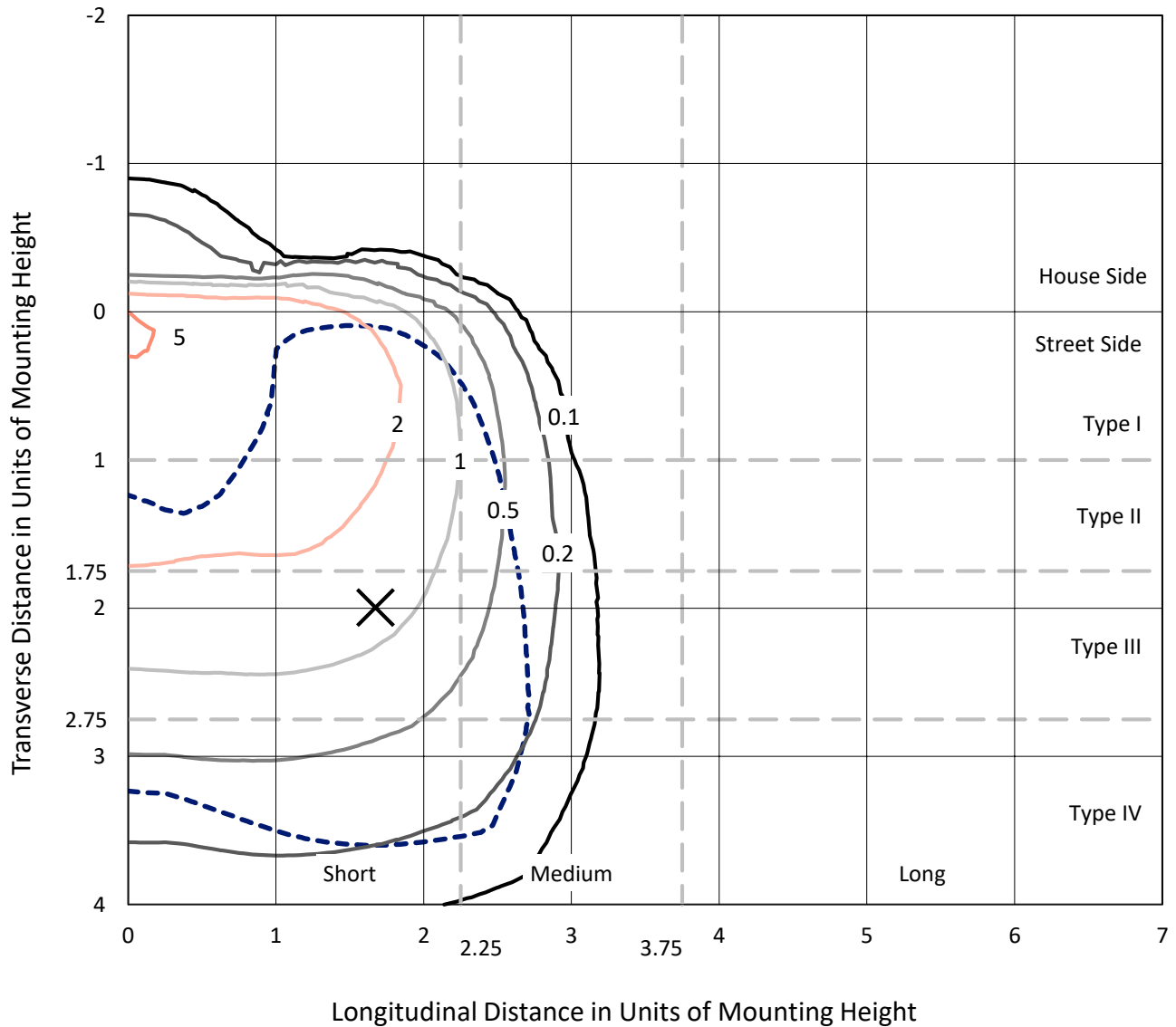
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

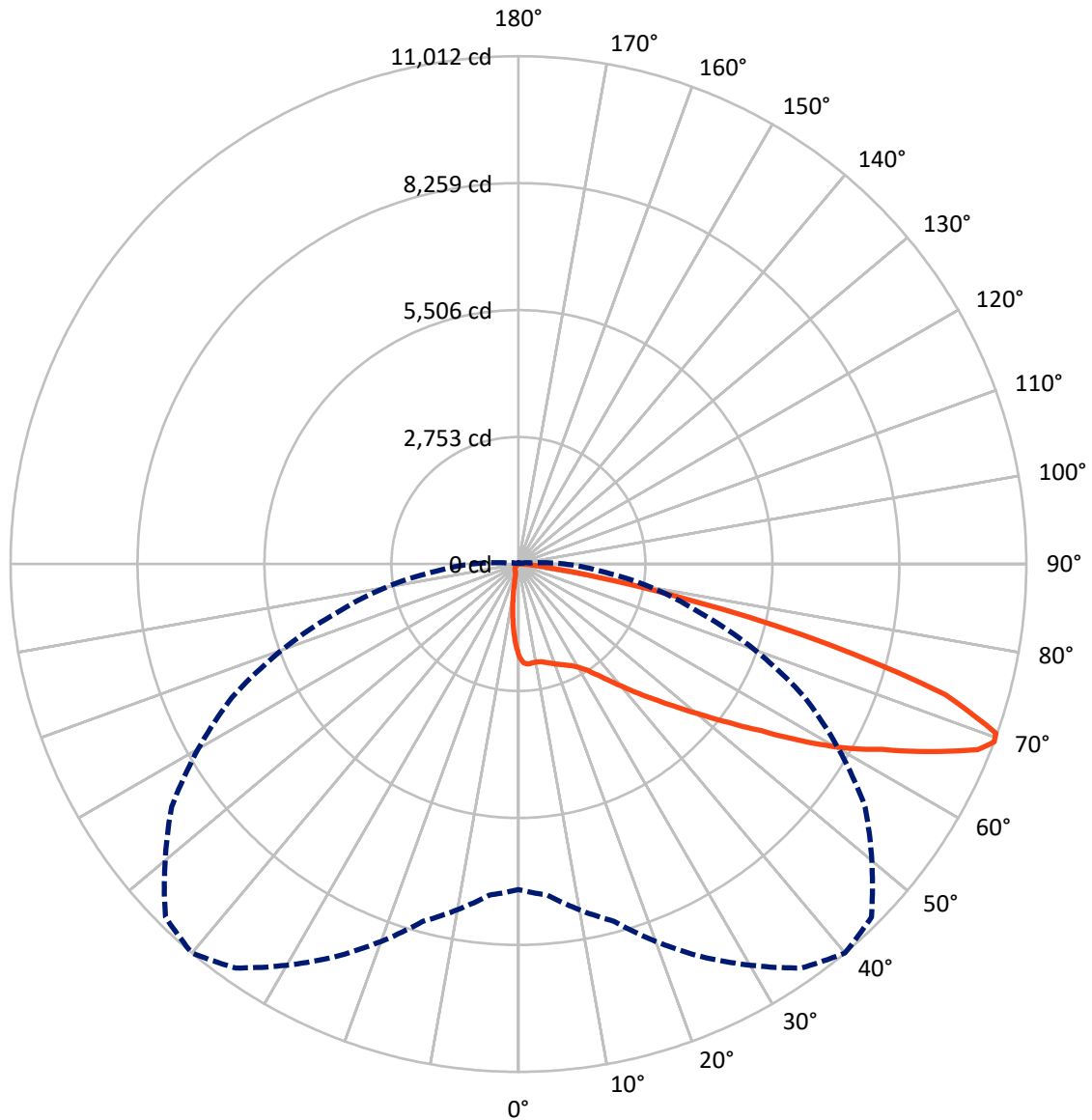
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.5 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	784.0	0.0	784.0
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	12616.6	0.0	12616.6
	% Fixture	94.1	0.0	94.1
Total	Lumens	13400.6	0.0	13400.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.3	1.2
10°-20°	399.2	3.0
20°-30°	672.4	5.0
30°-40°	1100.7	8.2
40°-50°	1905.9	14.2
50°-60°	3002.0	22.4
60°-70°	3920.5	29.3
70°-80°	2019.2	15.1
80°-90°	218.4	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°	13400.6	100.0
0°-180°	13400.6	100.0



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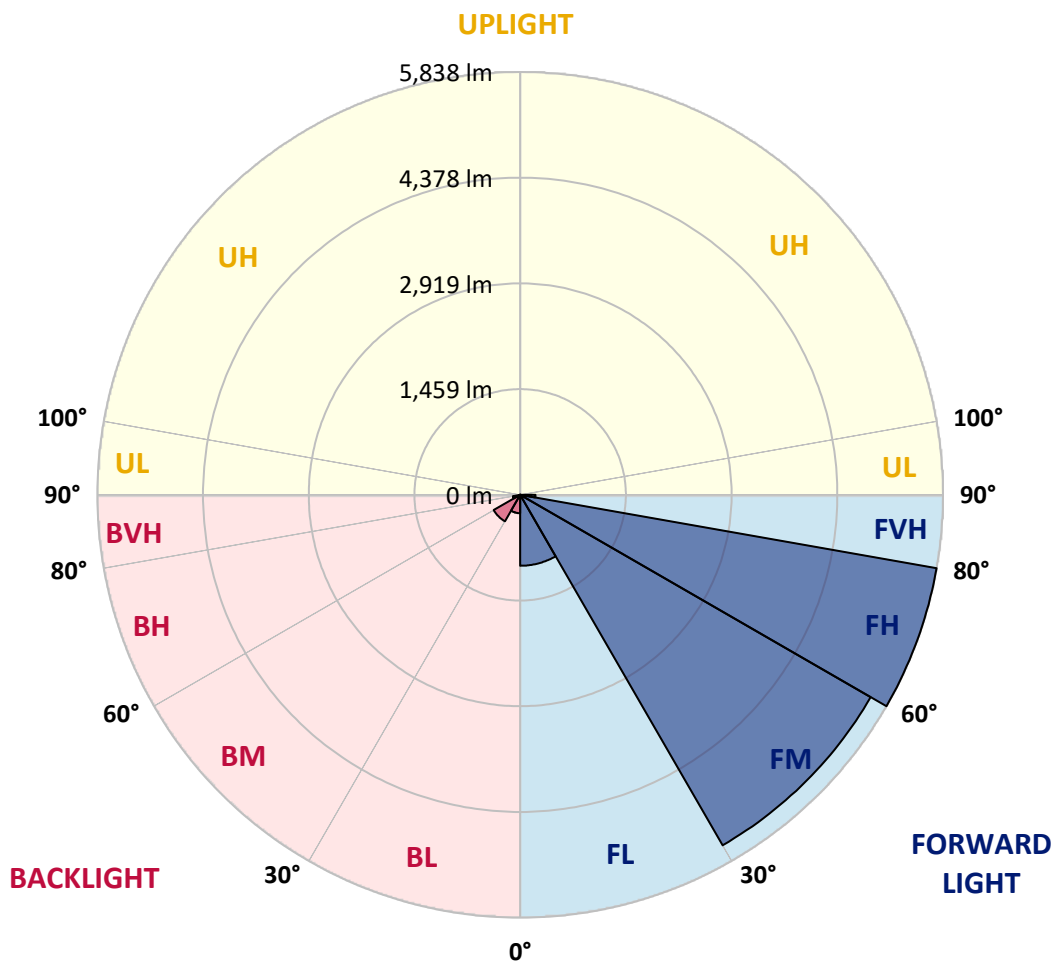
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	980.0	7.3			
FM	(30°-60°)	5587.2	41.7			
FH	(60°-80°)	5837.9	43.6			G3/7500
FVH	(80°-90°)	211.6	1.6			G2/225
BL	(0°-30°)	254.0	1.9	B1/500		
BM	(30°-60°)	421.4	3.1	B1/1000		
BH	(60°-80°)	101.8	0.8	B0/110		G0/110
BVH	(80°-90°)	6.9	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°	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1
2.5°	2198.3	2186.4	2179.2	2169.6	2157.7	2147.3	2143.3	2113.8	2085.9	2047.6	2003.7
5°	2239.0	2235.0	2222.3	2209.5	2195.2	2179.2	2170.4	2135.3	2095.4	2039.6	1963.0
7.5°	2243.0	2238.2	2222.3	2204.7	2184.8	2165.6	2150.5	2115.4	2078.7	2022.1	1928.7
10°	2236.6	2231.1	2219.1	2199.9	2175.2	2156.9	2141.7	2108.2	2077.1	2026.1	1922.4
12.5°	2229.5	2223.9	2218.3	2208.7	2187.2	2174.4	2161.7	2129.7	2101.8	2058.8	1945.5
15°	2236.6	2233.4	2239.8	2235.8	2223.9	2212.7	2199.9	2171.2	2145.7	2109.8	1987.8
17.5°	2266.9	2266.9	2286.9	2289.3	2278.1	2262.2	2243.8	2215.1	2193.6	2163.2	2038.0
20°	2337.9	2335.5	2361.1	2365.9	2338.7	2314.0	2286.9	2251.8	2235.0	2215.9	2087.5
22.5°	2460.0	2448.8	2464.0	2459.2	2405.7	2367.5	2333.9	2290.9	2282.1	2273.3	2142.5
25°	2618.7	2612.3	2622.7	2575.6	2481.5	2429.7	2389.8	2341.1	2341.1	2349.9	2204.7
27.5°	2849.2	2825.3	2790.2	2707.3	2566.1	2499.9	2456.8	2404.9	2418.5	2451.2	2286.9
30°	3085.3	3059.0	2978.5	2850.8	2669.0	2599.6	2549.3	2495.1	2527.0	2586.8	2397.0
32.5°	3318.3	3288.7	3174.7	3013.6	2816.5	2747.1	2698.5	2638.7	2692.1	2792.6	2558.1
35°	3544.0	3517.7	3386.1	3196.2	3012.8	2955.3	2910.7	2858.8	2927.4	3067.8	2785.4
37.5°	3797.7	3768.9	3608.6	3402.8	3251.3	3209.8	3177.1	3125.2	3244.9	3450.7	3102.1
40°	4109.5	4060.9	3844.7	3639.7	3527.2	3507.3	3485.0	3477.8	3663.6	3948.4	3524.1
42.5°	4466.9	4387.1	4092.0	3889.4	3830.4	3844.7	3839.1	3871.0	4187.7	4567.4	4037.7
45°	4824.2	4721.3	4367.2	4155.8	4163.8	4214.0	4245.1	4372.8	4844.2	5277.3	4590.5
47.5°	5127.3	5026.0	4631.2	4443.8	4539.5	4638.4	4722.9	4964.6	5519.0	5976.1	5020.5
50°	5386.6	5290.9	4911.2	4760.4	4975.8	5135.3	5272.5	5630.7	6244.9	6508.1	5322.0
52.5°	5598.8	5535.0	5201.5	5123.4	5474.3	5708.0	5909.1	6338.2	6887.8	6940.4	5556.5
55°	5805.4	5759.9	5513.4	5554.9	6059.8	6378.1	6632.5	7088.8	7441.4	7301.0	5781.4
57.5°	6043.1	6001.6	5869.2	6102.1	6829.6	7230.0	7507.6	7754.0	7928.7	7669.5	5993.6
60°	6285.5	6261.6	6264.8	6709.9	7713.4	8097.8	8251.0	8314.8	8407.3	8016.5	6005.6
62.5°	6516.9	6562.3	6717.1	7386.3	8559.7	8854.8	8932.2	8995.2	8886.7	8071.5	5548.5
65°	6908.5	6982.7	7352.0	8291.7	9490.5	9806.4	9886.2	9670.0	8962.5	7360.0	4513.2
67.5°	7100.0	7235.6	7894.4	9135.6	10393.5	10744.5	10714.9	9713.9	8042.8	5612.3	2896.3
69°	7060.1	7204.5	8019.7	9394.0	10693.4	11011.7	10824.2	9177.1	6851.9	4065.7	1778.0
70°	6902.1	7048.1	7955.0	9384.5	10731.7	10983.8	10621.6	8514.2	5793.4	2972.9	1111.9
72.5°	5763.9	5889.9	7062.5	8482.3	9886.2	9681.2	8885.9	5898.7	2822.9	809.6	250.5
75°	3548.0	3618.2	5067.5	6390.0	7466.9	6940.4	5920.2	2934.6	841.5	228.9	138.8
77.5°	1874.5	1906.4	2774.3	3766.5	4733.3	3916.5	3034.3	1144.6	387.7	143.6	100.5
80°	1107.9	1131.9	1494.0	1722.1	2048.4	1711.0	1213.2	702.7	277.6	90.1	89.3
82.5°	634.1	649.3	1083.2	957.2	807.2	689.2	603.8	666.0	166.7	60.6	92.5
85°	232.9	236.1	609.4	728.3	480.2	285.6	299.9	552.0	44.7	38.3	72.6
87.5°	108.5	106.1	313.5	445.9	280.8	181.1	233.7	121.2	17.5	24.7	19.9
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°	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1	2002.1
2.5°	1978.2	1948.7	1895.2	1840.2	1784.4	1741.3	1699.0	1665.5	1654.3	1633.6	1635.2
5°	1917.6	1863.3	1751.7	1638.4	1520.3	1423.0	1331.3	1257.1	1221.2	1184.5	1184.5
7.5°	1864.9	1786.0	1611.3	1427.0	1236.4	1076.0	931.7	823.2	763.4	715.5	714.7
10°	1845.0	1738.1	1494.0	1230.0	964.4	745.8	574.3	464.2	407.6	370.9	369.3
12.5°	1853.8	1721.3	1403.9	1048.1	714.7	479.4	332.6	261.6	237.7	226.5	226.5
15°	1879.3	1716.6	1313.7	870.2	504.9	299.9	221.0	201.8	200.2	200.2	200.2
17.5°	1910.4	1718.2	1221.2	697.2	343.8	214.6	190.6	188.2	189.8	189.8	189.8
20°	1942.3	1719.0	1121.5	536.8	242.5	186.7	179.5	178.7	180.3	180.3	181.1
22.5°	1981.4	1722.9	1021.8	401.2	200.2	176.3	170.7	170.7	171.5	171.5	170.7
25°	2026.1	1730.9	918.1	297.5	182.7	169.1	164.3	163.5	164.3	163.5	162.7
27.5°	2081.9	1742.1	802.4	232.9	174.7	161.9	157.9	157.9	157.1	156.3	155.5
30°	2152.1	1754.8	672.4	197.8	166.7	155.5	151.6	150.8	150.0	148.4	148.4
32.5°	2259.0	1782.8	544.0	179.5	157.9	146.8	143.6	143.6	142.0	140.4	139.6
35°	2423.3	1837.8	429.1	168.3	148.4	137.2	133.2	133.2	131.6	130.8	130.0
37.5°	2650.6	1921.6	333.4	157.9	138.8	126.8	122.8	122.0	120.4	118.9	118.1
40°	2952.9	2025.3	262.4	148.4	129.2	116.5	113.3	111.7	108.5	106.1	106.1
42.5°	3332.6	2143.3	213.0	138.0	118.1	106.9	104.5	102.1	96.5	94.1	93.3
45°	3729.9	2249.4	180.3	126.0	106.9	97.3	95.7	91.7	84.6	82.2	82.2
47.5°	4016.2	2274.1	158.7	114.9	96.5	86.9	86.1	79.0	72.6	71.0	70.2
50°	4194.9	2225.5	141.2	103.7	86.9	77.4	75.0	66.2	62.2	60.6	59.8
52.5°	4315.3	2138.5	126.8	94.1	78.2	68.6	63.0	56.6	53.4	51.8	51.8
55°	4411.8	2015.7	112.5	85.3	71.0	61.4	53.4	48.7	45.5	43.9	43.9
57.5°	4439.0	1849.0	98.1	78.2	63.8	54.2	45.5	42.3	38.3	37.5	37.5
60°	4241.9	1548.3	86.9	69.4	57.4	47.1	39.9	35.9	31.9	31.1	30.3
62.5°	3722.7	1198.1	76.6	61.4	50.3	40.7	34.3	29.5	26.3	26.3	26.3
65°	2839.7	803.2	67.0	53.4	43.9	34.3	29.5	23.9	22.3	22.3	23.1
67.5°	1699.8	437.1	57.4	45.5	37.5	28.7	24.7	20.7	19.9	20.7	20.7
69°	996.3	256.8	51.8	40.7	32.7	25.5	21.5	18.3	19.9	20.7	20.7
70°	615.0	173.1	47.9	36.7	29.5	23.1	19.9	17.5	19.1	19.9	19.9
72.5°	171.5	89.3	38.3	28.7	23.9	19.1	16.0	16.0	18.3	19.1	19.1
75°	111.7	66.2	29.5	21.5	18.3	15.2	13.6	15.2	17.5	18.3	18.3
77.5°	92.5	54.2	23.9	17.5	15.2	14.4	12.8	13.6	16.0	16.8	16.8
80°	84.6	38.3	19.1	16.0	13.6	12.8	12.0	11.2	14.4	15.2	15.2
82.5°	80.6	30.3	16.8	14.4	12.8	11.2	10.4	11.2	12.8	13.6	14.4
85°	50.3	19.9	15.2	13.6	11.2	10.4	10.4	10.4	12.0	12.8	12.8
87.5°	18.3	16.0	13.6	11.2	9.6	9.6	9.6	9.6	10.4	12.0	12.0
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)