

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: P299593

Luminaire Tested: **GLNA-AF-04-LED-E1-5MQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299593
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24142)
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-E1-5MQ-7027
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21840.9 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

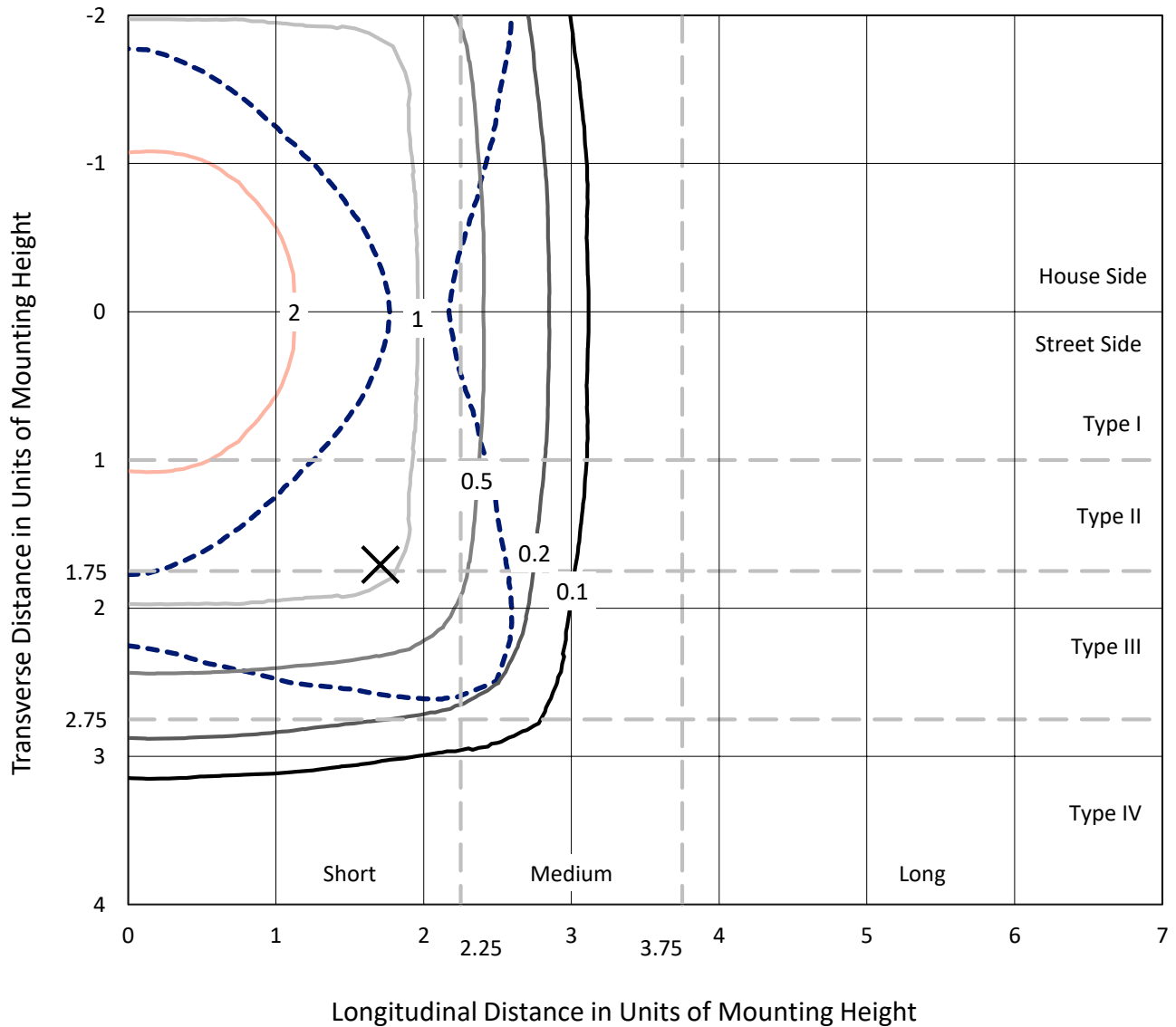
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

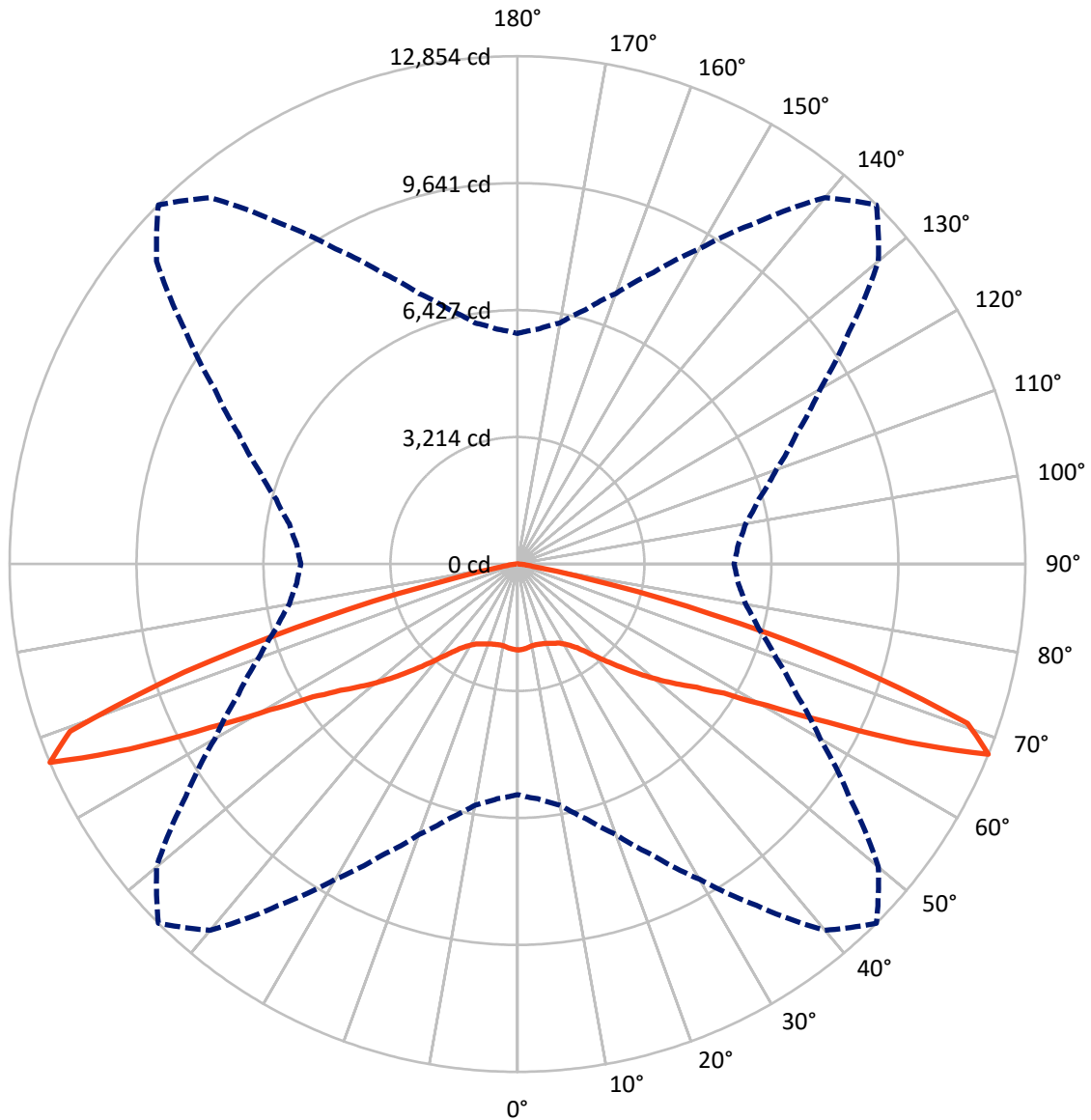
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10920.4	0.0	10920.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10920.4	0.0	10920.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	21840.9	0.0	21840.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.7	0.9
10°-20°	591.1	2.7
20°-30°	1004.9	4.6
30°-40°	1642.7	7.5
40°-50°	2932.6	13.4
50°-60°	4944.4	22.6
60°-70°	7673.0	35.1
70°-80°	2696.0	12.3
80°-90°	152.4	0.7
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°	21840.9	100.0
0°-180°	21840.9	100.0



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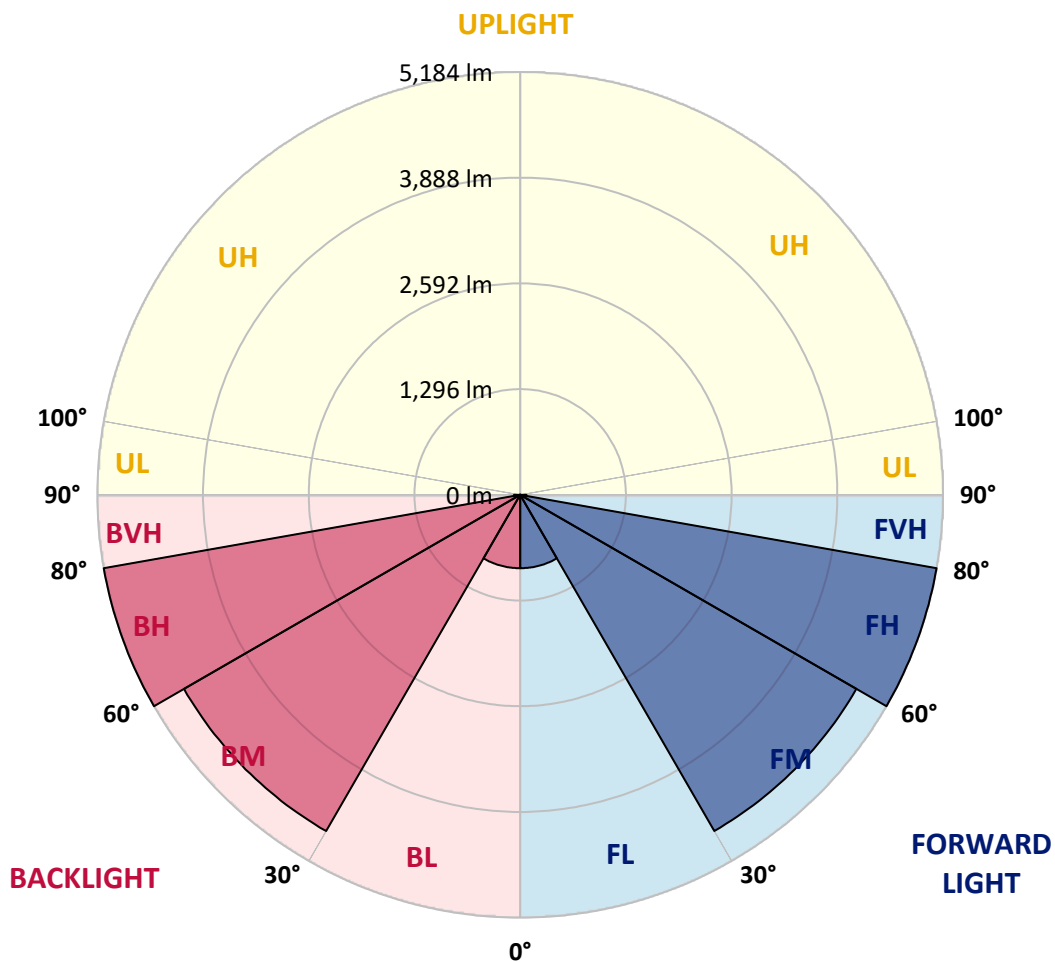
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	899.9	4.1			
FM	(30°-60°)	4759.9	21.8			
FH	(60°-80°)	5184.5	23.7			G3/7500
FVH	(80°-90°)	76.2	0.3			G1/100
BL	(0°-30°)	899.9	4.1	B2/1000		
BM	(30°-60°)	4759.9	21.8	B3/5000		
BH	(60°-80°)	5184.5	23.7	B5		G3/7500
BVH	(80°-90°)	76.2	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2176.5	2176.5	2176.5	2176.5	2176.5	2176.5	2176.5	2176.5	2176.5	2176.5	2176.5
2.5°	2168.5	2170.5	2170.5	2170.5	2169.5	2169.5	2167.5	2169.5	2168.5	2165.5	2166.5
5°	2150.4	2152.4	2152.4	2151.4	2154.4	2153.4	2150.4	2152.4	2151.4	2149.4	2150.4
7.5°	2124.3	2127.3	2127.3	2126.3	2129.3	2128.3	2126.3	2127.3	2127.3	2124.3	2124.3
10°	2095.2	2097.2	2097.2	2096.2	2101.2	2101.2	2100.2	2103.2	2104.2	2101.2	2099.2
12.5°	2068.1	2071.1	2071.1	2075.1	2080.1	2082.1	2087.1	2091.2	2095.2	2094.2	2090.2
15°	2052.0	2054.0	2058.0	2063.0	2071.1	2078.1	2086.1	2095.2	2103.2	2105.2	2099.2
17.5°	2041.9	2045.0	2051.0	2058.0	2069.1	2081.1	2093.2	2105.2	2116.3	2120.3	2113.3
20°	2038.9	2040.9	2047.0	2059.0	2074.1	2092.2	2109.2	2123.3	2138.4	2143.4	2138.4
22.5°	2045.0	2049.0	2056.0	2070.1	2090.2	2113.3	2133.3	2152.4	2171.5	2180.6	2173.5
25°	2072.1	2076.1	2085.1	2103.2	2125.3	2149.4	2172.5	2194.6	2211.7	2220.7	2215.7
27.5°	2122.3	2127.3	2138.4	2156.4	2180.6	2206.7	2231.8	2249.9	2263.9	2266.9	2260.9
30°	2197.6	2208.7	2221.7	2241.8	2269.9	2292.0	2317.2	2333.2	2350.3	2350.3	2345.3
32.5°	2315.1	2326.2	2340.3	2359.3	2381.4	2405.5	2427.6	2441.7	2459.8	2460.8	2448.7
35°	2490.9	2495.9	2508.0	2520.0	2540.1	2561.2	2580.3	2589.3	2604.4	2605.4	2594.4
37.5°	2722.9	2723.9	2732.0	2736.0	2754.1	2777.2	2795.2	2801.3	2815.3	2813.3	2802.3
40°	2993.1	2998.1	3001.1	3007.2	3026.3	3048.4	3067.4	3070.5	3085.5	3082.5	3068.4
42.5°	3305.5	3307.5	3324.6	3333.6	3351.7	3362.7	3386.8	3389.9	3407.9	3399.9	3383.8
45°	3656.0	3674.1	3690.2	3708.2	3727.3	3740.4	3759.5	3755.5	3767.5	3755.5	3746.4
47.5°	4024.6	4037.7	4073.8	4102.0	4133.1	4144.2	4171.3	4159.2	4171.3	4154.2	4151.2
50°	4430.4	4453.5	4484.6	4516.8	4549.9	4568.0	4603.2	4588.1	4604.2	4588.1	4579.1
52.5°	4830.2	4836.2	4904.5	4951.7	4997.9	5019.0	5040.1	5033.1	5034.1	5033.1	5024.0
55°	5209.8	5223.9	5292.2	5356.5	5436.8	5496.1	5532.2	5528.2	5519.2	5510.1	5495.1
57.5°	5637.7	5651.8	5730.1	5809.5	5900.9	5985.2	6058.5	6133.9	6163.0	6171.0	6137.9
60°	6216.2	6215.2	6319.7	6416.1	6546.7	6672.2	6832.9	6996.7	7184.5	7271.9	7156.4
62.5°	6804.8	6828.9	6979.6	7150.3	7419.5	7681.7	7978.0	8269.2	8566.5	8808.6	8551.5
65°	6734.5	6826.9	7050.9	7437.6	7934.8	8525.4	9164.2	9840.1	10450.8	10870.6	10399.6
67.5°	5836.6	5968.1	6196.1	6666.2	7287.9	8139.7	9212.4	10549.2	12103.0	12854.3	11923.2
70°	4230.5	4379.2	4618.2	5077.2	5692.9	6502.5	7667.6	9272.6	11329.6	12087.0	11061.5
72.5°	2105.2	2185.6	2333.2	2625.5	3091.5	3748.4	4805.1	6347.8	8167.8	8862.8	7925.7
75°	715.1	752.3	777.4	872.8	1020.5	1278.6	1803.9	2775.2	4233.5	5075.2	4173.3
77.5°	412.8	413.8	430.9	448.0	473.1	501.2	571.5	750.3	1297.7	1843.1	1342.9
80°	267.2	266.2	280.2	293.3	310.4	324.4	328.4	347.5	400.8	475.1	424.9
82.5°	138.6	155.7	186.8	203.9	236.0	242.1	234.0	227.0	240.1	249.1	255.1
85°	76.3	66.3	99.4	128.6	142.6	144.6	144.6	136.6	141.6	138.6	150.7
87.5°	35.2	32.1	39.2	63.3	67.3	57.3	60.3	53.2	38.2	37.2	42.2
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2176.5	2176.5	2176.5	2176.5	2176.5	2176.5	2176.5	2176.5
2.5°	2166.5	2167.5	2167.5	2170.5	2171.5	2173.5	2175.5	2176.5
5°	2149.4	2152.4	2150.4	2153.4	2153.4	2155.4	2155.4	2156.4
7.5°	2124.3	2127.3	2127.3	2127.3	2126.3	2129.3	2129.3	2129.3
10°	2098.2	2100.2	2099.2	2097.2	2095.2	2098.2	2097.2	2096.2
12.5°	2090.2	2085.1	2081.1	2079.1	2075.1	2076.1	2073.1	2073.1
15°	2095.2	2086.1	2079.1	2076.1	2072.1	2070.1	2068.1	2069.1
17.5°	2108.2	2097.2	2088.1	2083.1	2078.1	2075.1	2071.1	2072.1
20°	2131.3	2118.3	2105.2	2095.2	2086.1	2081.1	2078.1	2077.1
22.5°	2165.5	2146.4	2127.3	2112.3	2100.2	2093.2	2090.2	2088.1
25°	2204.7	2183.6	2161.5	2144.4	2132.3	2123.3	2117.3	2117.3
27.5°	2253.9	2236.8	2216.7	2196.6	2185.6	2176.5	2172.5	2170.5
30°	2336.2	2320.2	2304.1	2285.0	2270.9	2261.9	2254.9	2248.9
32.5°	2441.7	2428.6	2415.6	2401.5	2388.5	2376.4	2365.4	2360.3
35°	2590.3	2580.3	2571.3	2555.2	2550.2	2543.1	2537.1	2532.1
37.5°	2795.2	2791.2	2791.2	2774.2	2770.1	2767.1	2761.1	2762.1
40°	3064.4	3068.4	3063.4	3057.4	3054.4	3046.3	3046.3	3053.4
42.5°	3382.8	3385.8	3396.9	3386.8	3397.9	3387.8	3381.8	3386.8
45°	3752.4	3763.5	3785.6	3775.5	3782.6	3765.5	3744.4	3745.4
47.5°	4167.3	4177.3	4186.3	4179.3	4180.3	4152.2	4124.1	4117.0
50°	4598.1	4602.2	4607.2	4597.1	4599.1	4568.0	4535.9	4536.9
52.5°	5024.0	5043.1	5063.2	5036.1	5030.0	4994.9	4949.7	4931.6
55°	5511.1	5538.3	5515.2	5468.0	5420.7	5373.5	5314.3	5304.2
57.5°	6111.8	6065.6	5993.3	5903.9	5838.6	5772.3	5712.0	5686.9
60°	6947.4	6773.7	6643.1	6510.5	6427.2	6345.8	6266.5	6254.4
62.5°	8128.6	7828.3	7568.2	7294.0	7070.0	6895.2	6755.6	6716.4
65°	9609.1	8899.0	8283.3	7708.8	7209.6	6832.9	6595.9	6491.4
67.5°	10245.9	8843.7	7788.1	6972.5	6319.7	5863.7	5607.6	5480.0
70°	9003.4	7334.1	6186.1	5369.5	4774.9	4288.8	4056.8	3920.2
72.5°	6194.1	4665.4	3689.2	3011.2	2536.1	2129.3	1968.6	1956.6
75°	2781.2	1842.1	1269.6	978.3	823.6	716.1	683.0	657.9
77.5°	778.4	575.5	513.2	480.1	448.0	410.8	396.7	399.8
80°	378.7	357.6	343.5	322.4	293.3	262.1	248.1	254.1
82.5°	251.1	248.1	257.1	242.1	199.9	169.7	142.6	130.6
85°	152.7	154.7	157.7	158.7	134.6	94.4	64.3	72.3
87.5°	60.3	69.3	75.3	78.3	73.3	45.2	36.2	37.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)