

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: P299590

Luminaire Tested: **GLNA-AF-03-LED-E1-5MQ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299590  
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-03-LED-E1-5MQ  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(3) 70 CRI, 4000K 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: 19025 lumens  
Efficiency: N/A  
Efficacy: 114.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2  
  
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

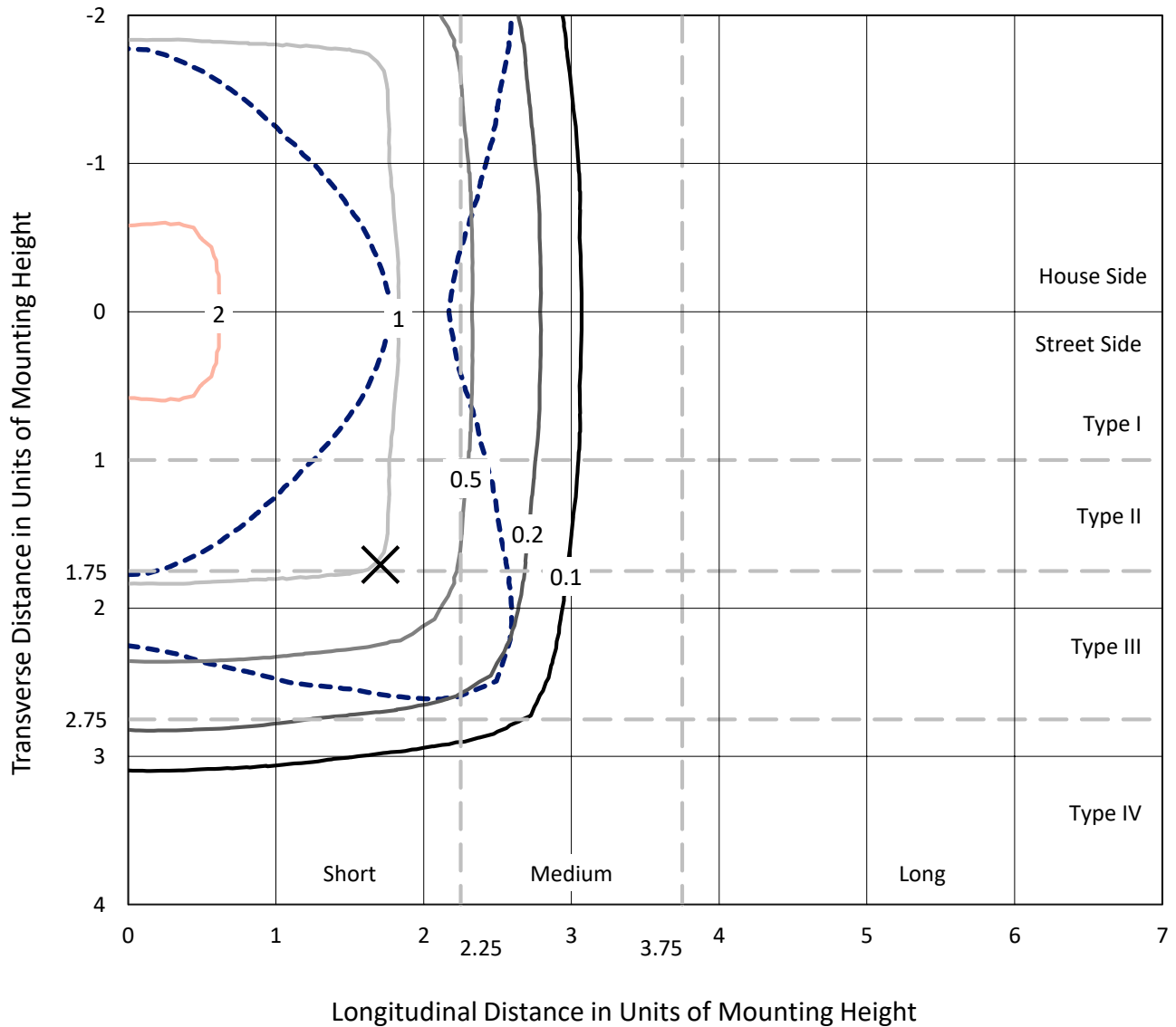


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

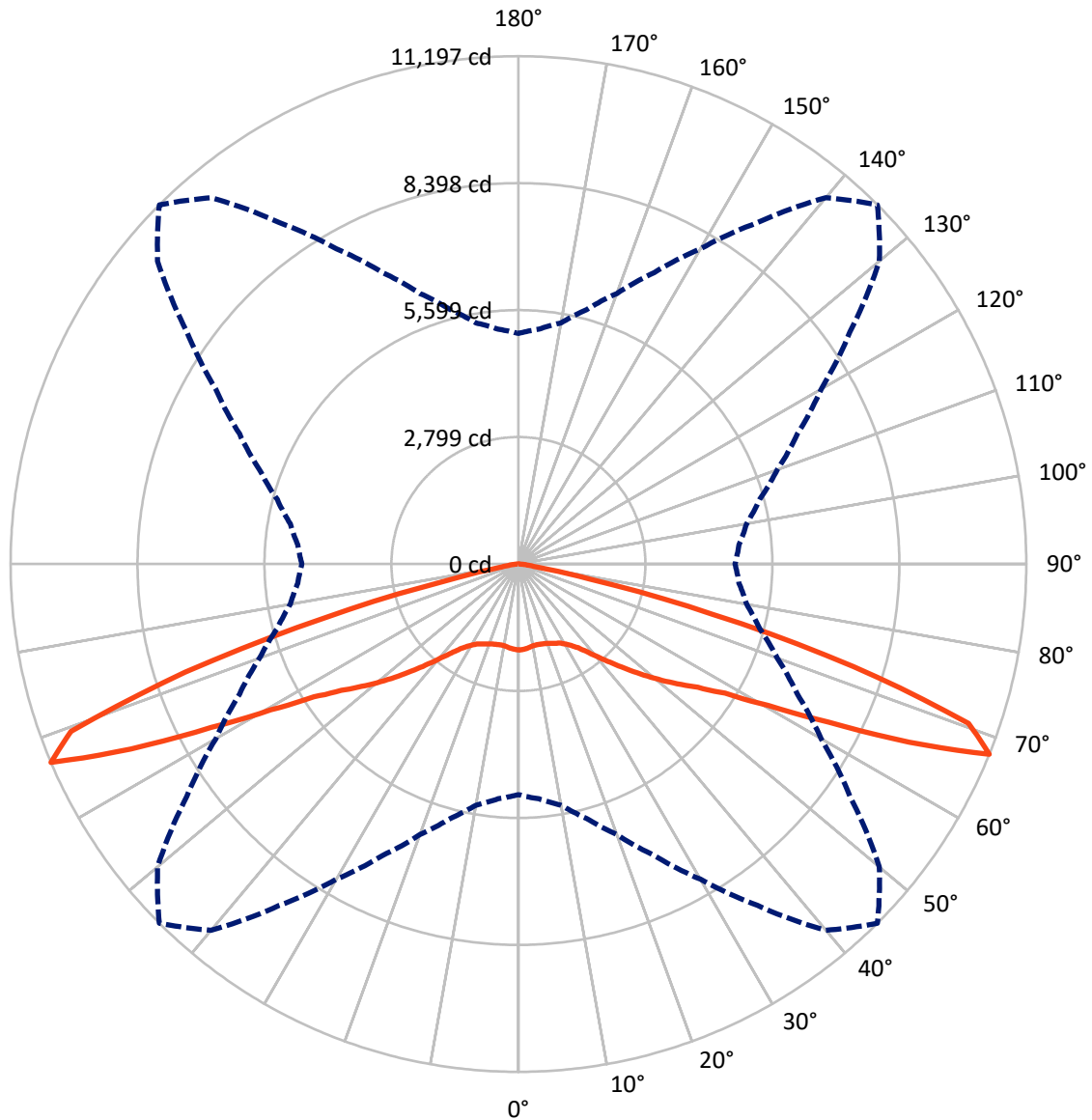


Based on 25 foot mounting height. Maximum calculated value = 3 fc  
 Type V - Short - Full Cutoff

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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
<b>House Side</b>	Lumens	9512.5	0.0	9512.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	9512.5	0.0	9512.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	19025.0	0.0	19025.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.4	0.9
10°-20°	514.9	2.7
20°-30°	875.4	4.6
30°-40°	1430.9	7.5
40°-50°	2554.5	13.4
50°-60°	4307.0	22.6
60°-70°	6683.8	35.1
70°-80°	2348.4	12.3
80°-90°	132.7	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°	19025.0	100.0
0°-180°	19025.0	100.0



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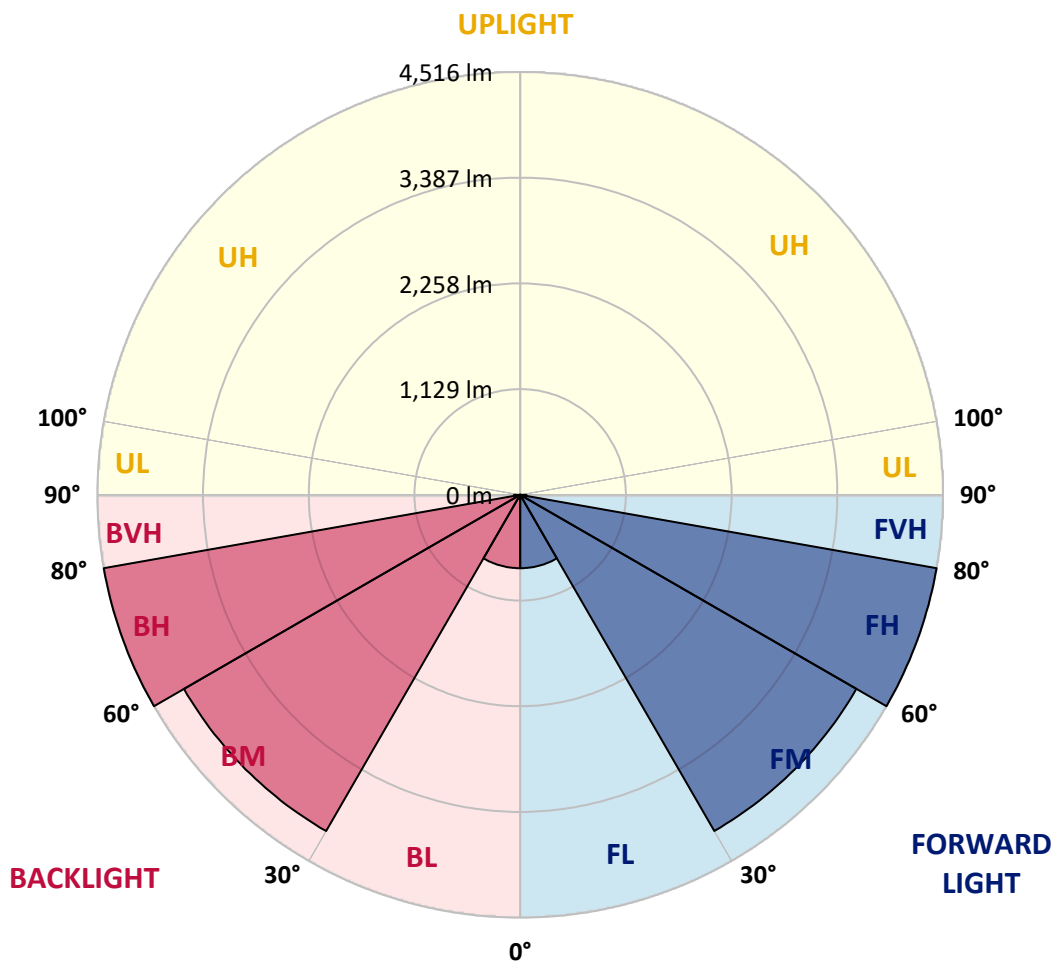
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	783.9	4.1			
FM	(30°-60°)	4146.2	21.8			
FH	(60°-80°)	4516.1	23.7			G2/5000
FVH	(80°-90°)	66.4	0.3			G1/100
BL	(0°-30°)	783.9	4.1	B2/1000		
BM	(30°-60°)	4146.2	21.8	B3/5000		
BH	(60°-80°)	4516.1	23.7	B4/5000		G2/5000
BVH	(80°-90°)	66.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1895.9	1895.9	1895.9	1895.9	1895.9	1895.9	1895.9	1895.9	1895.9	1895.9	1895.9
2.5°	1888.9	1890.7	1890.7	1890.7	1889.8	1889.8	1888.0	1889.8	1888.9	1886.3	1887.2
5°	1873.2	1874.9	1874.9	1874.0	1876.7	1875.8	1873.2	1874.9	1874.0	1872.3	1873.2
7.5°	1850.4	1853.1	1853.1	1852.2	1854.8	1853.9	1852.2	1853.1	1853.1	1850.4	1850.4
10°	1825.1	1826.8	1826.8	1825.9	1830.3	1830.3	1829.4	1832.1	1832.9	1830.3	1828.6
12.5°	1801.4	1804.1	1804.1	1807.6	1811.9	1813.7	1818.1	1821.6	1825.1	1824.2	1820.7
15°	1787.4	1789.2	1792.7	1797.1	1804.1	1810.2	1817.2	1825.1	1832.1	1833.8	1828.6
17.5°	1778.7	1781.3	1786.6	1792.7	1802.3	1812.8	1823.3	1833.8	1843.4	1846.9	1840.8
20°	1776.1	1777.8	1783.1	1793.6	1806.7	1822.4	1837.3	1849.6	1862.7	1867.1	1862.7
22.5°	1781.3	1784.8	1790.9	1803.2	1820.7	1840.8	1858.3	1874.9	1891.5	1899.4	1893.3
25°	1804.9	1808.4	1816.3	1832.1	1851.3	1872.3	1892.4	1911.7	1926.5	1934.4	1930.0
27.5°	1848.7	1853.1	1862.7	1878.4	1899.4	1922.2	1944.0	1959.8	1972.0	1974.7	1969.4
30°	1914.3	1923.9	1935.3	1952.8	1977.3	1996.5	2018.4	2032.4	2047.3	2047.3	2042.9
32.5°	2016.7	2026.3	2038.5	2055.2	2074.4	2095.4	2114.6	2126.9	2142.6	2143.5	2133.0
35°	2169.8	2174.1	2184.6	2195.1	2212.6	2231.0	2247.6	2255.5	2268.6	2269.5	2259.9
37.5°	2371.9	2372.7	2379.7	2383.2	2399.0	2419.1	2434.9	2440.1	2452.4	2450.6	2441.0
40°	2607.2	2611.6	2614.2	2619.5	2636.1	2655.3	2672.0	2674.6	2687.7	2685.1	2672.8
42.5°	2879.3	2881.1	2895.9	2903.8	2919.6	2929.2	2950.2	2952.8	2968.6	2961.6	2947.6
45°	3184.7	3200.4	3214.4	3230.2	3246.8	3258.2	3274.8	3271.3	3281.8	3271.3	3263.4
47.5°	3505.7	3517.1	3548.6	3573.1	3600.2	3609.9	3633.5	3623.0	3633.5	3618.6	3616.0
50°	3859.2	3879.3	3906.5	3934.5	3963.3	3979.1	4009.7	3996.6	4010.6	3996.6	3988.7
52.5°	4207.4	4212.7	4272.2	4313.3	4353.5	4371.9	4390.3	4384.2	4385.0	4384.2	4376.3
55°	4538.1	4550.4	4609.9	4665.9	4735.9	4787.5	4819.0	4815.5	4807.6	4799.7	4786.6
57.5°	4910.8	4923.1	4991.3	5060.5	5140.1	5213.6	5277.4	5343.1	5368.4	5375.4	5346.6
60°	5414.8	5413.9	5504.9	5588.9	5702.6	5812.0	5952.0	6094.6	6258.2	6334.3	6233.7
62.5°	5927.5	5948.5	6079.7	6228.5	6462.9	6691.3	6949.4	7203.1	7462.1	7672.9	7449.0
65°	5866.2	5946.7	6141.8	6478.7	6911.8	7426.2	7982.6	8571.5	9103.4	9469.1	9058.8
67.5°	5084.1	5198.7	5397.3	5806.8	6348.3	7090.2	8024.6	9189.1	10542.6	11197.1	10386.0
70°	3685.1	3814.6	4022.8	4422.7	4959.0	5664.1	6679.0	8077.1	9868.9	10528.6	9635.3
72.5°	1833.8	1903.8	2032.4	2287.0	2693.0	3265.2	4185.6	5529.4	7114.7	7720.2	6903.9
75°	622.9	655.3	677.2	760.3	888.9	1113.8	1571.3	2417.4	3687.7	4420.9	3635.2
77.5°	359.6	360.5	375.3	390.2	412.1	436.6	497.8	653.6	1130.4	1605.5	1169.7
80°	232.7	231.9	244.1	255.5	270.3	282.6	286.1	302.7	349.1	413.8	370.1
82.5°	120.7	135.6	162.7	177.6	205.6	210.9	203.9	197.7	209.1	217.0	222.2
85°	66.5	57.7	86.6	112.0	124.2	126.0	126.0	119.0	123.4	120.7	131.2
87.5°	30.6	28.0	34.1	55.1	58.6	49.9	52.5	46.4	33.2	32.4	36.7
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°	1895.9	1895.9	1895.9	1895.9	1895.9	1895.9	1895.9	1895.9
2.5°	1887.2	1888.0	1888.0	1890.7	1891.5	1893.3	1895.0	1895.9
5°	1872.3	1874.9	1873.2	1875.8	1875.8	1877.5	1877.5	1878.4
7.5°	1850.4	1853.1	1853.1	1853.1	1852.2	1854.8	1854.8	1854.8
10°	1827.7	1829.4	1828.6	1826.8	1825.1	1827.7	1826.8	1825.9
12.5°	1820.7	1816.3	1812.8	1811.1	1807.6	1808.4	1805.8	1805.8
15°	1825.1	1817.2	1811.1	1808.4	1804.9	1803.2	1801.4	1802.3
17.5°	1836.4	1826.8	1818.9	1814.6	1810.2	1807.6	1804.1	1804.9
20°	1856.6	1845.2	1833.8	1825.1	1817.2	1812.8	1810.2	1809.3
22.5°	1886.3	1869.7	1853.1	1839.9	1829.4	1823.3	1820.7	1818.9
25°	1920.4	1902.0	1882.8	1867.9	1857.4	1849.6	1844.3	1844.3
27.5°	1963.3	1948.4	1930.9	1913.4	1903.8	1895.9	1892.4	1890.7
30°	2035.0	2021.0	2007.0	1990.4	1978.2	1970.3	1964.2	1958.9
32.5°	2126.9	2115.5	2104.1	2091.9	2080.5	2070.0	2060.4	2056.0
35°	2256.4	2247.6	2239.8	2225.8	2221.4	2215.3	2210.0	2205.6
37.5°	2434.9	2431.4	2431.4	2416.5	2413.0	2410.4	2405.1	2406.0
40°	2669.3	2672.8	2668.5	2663.2	2660.6	2653.6	2653.6	2659.7
42.5°	2946.7	2949.3	2958.9	2950.2	2959.8	2951.1	2945.8	2950.2
45°	3268.7	3278.3	3297.5	3288.8	3294.9	3280.0	3261.7	3262.5
47.5°	3630.0	3638.7	3646.6	3640.5	3641.4	3616.9	3592.4	3586.2
50°	4005.3	4008.8	4013.2	4004.4	4006.2	3979.1	3951.1	3952.0
52.5°	4376.3	4392.9	4410.4	4386.8	4381.5	4350.9	4311.5	4295.8
55°	4800.6	4824.2	4804.1	4763.0	4721.9	4680.7	4629.1	4620.4
57.5°	5323.8	5283.6	5220.6	5142.7	5085.8	5028.1	4975.6	4953.7
60°	6051.7	5900.4	5786.6	5671.1	5598.5	5527.7	5458.5	5448.0
62.5°	7080.6	6819.0	6592.4	6353.6	6158.5	6006.2	5884.6	5850.5
65°	8370.2	7751.7	7215.4	6714.9	6280.1	5952.0	5745.5	5654.5
67.5°	8924.9	7703.6	6784.0	6073.6	5504.9	5107.7	4884.6	4773.5
70°	7842.7	6388.6	5388.5	4677.2	4159.3	3735.9	3533.7	3414.8
72.5°	5395.5	4063.9	3213.5	2623.0	2209.1	1854.8	1714.8	1704.3
75°	2422.6	1604.6	1105.9	852.2	717.4	623.8	594.9	573.1
77.5°	678.1	501.3	447.1	418.2	390.2	357.8	345.6	348.2
80°	329.8	311.5	299.2	280.8	255.5	228.4	216.1	221.4
82.5°	218.7	216.1	224.0	210.9	174.1	147.9	124.2	113.7
85°	133.0	134.7	137.4	138.2	117.2	82.2	56.0	63.0
87.5°	52.5	60.4	65.6	68.2	63.9	39.4	31.5	32.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)