

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: P299657

Luminaire Tested: **GLNA-AF-04-LED-E1-5MQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299657
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-7050-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20308.5 lumens
Efficiency: N/A
Efficacy: 118.8 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): 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

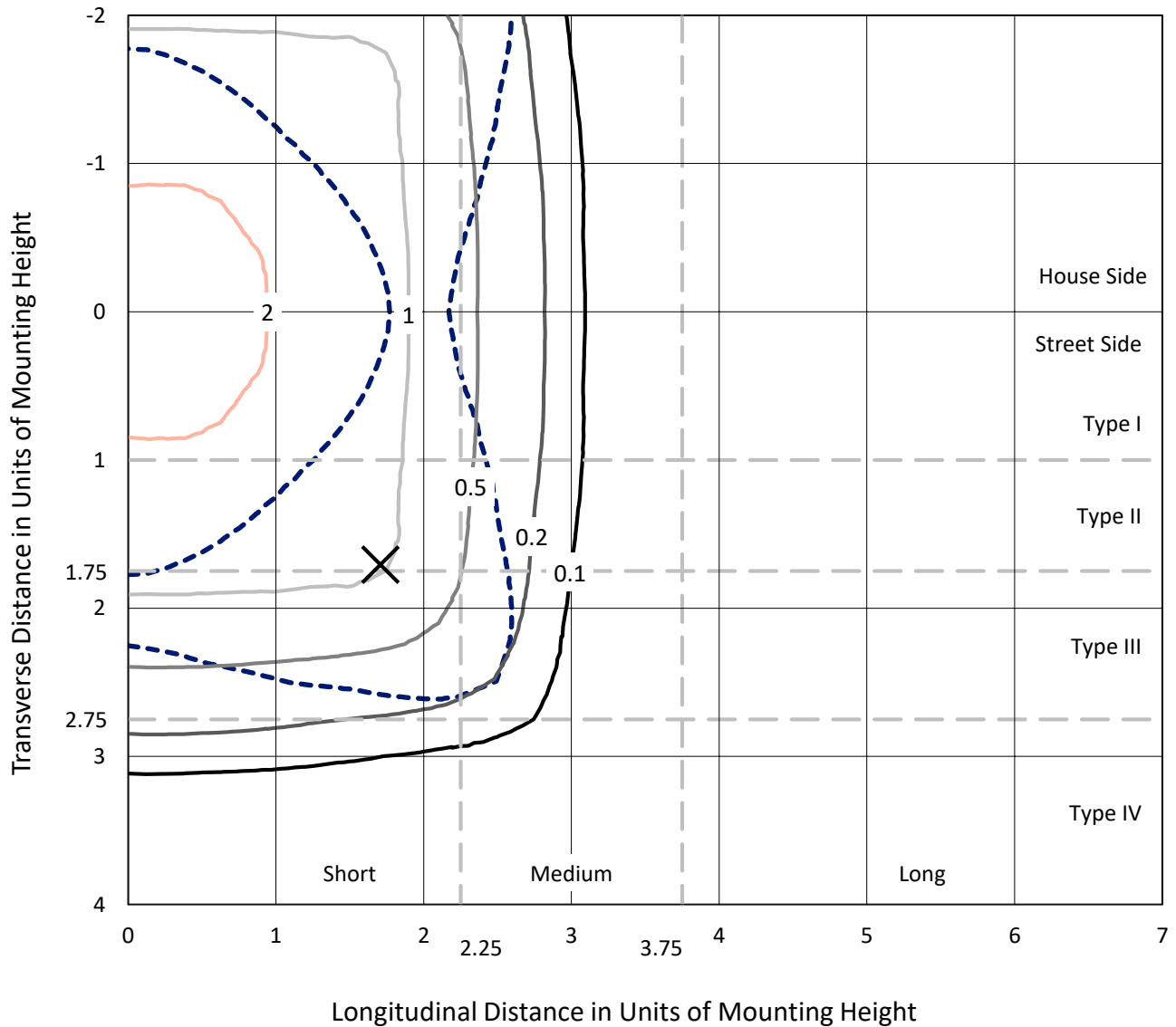


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

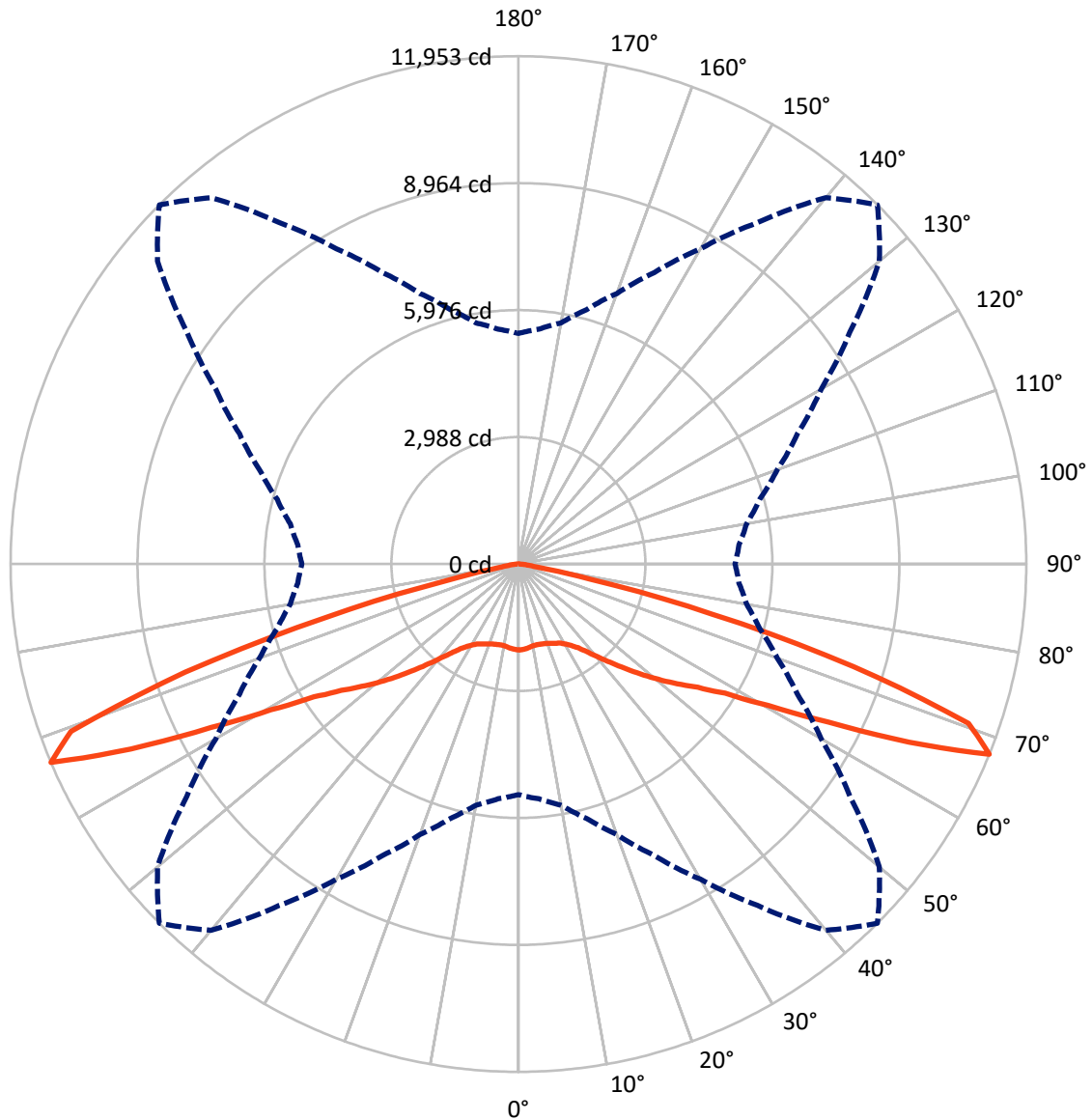


Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type V - Short - Full Cutoff

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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	10154.3	0.0	10154.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10154.3	0.0	10154.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	20308.5	0.0	20308.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.4	0.9
10°-20°	549.7	2.7
20°-30°	934.4	4.6
30°-40°	1527.5	7.5
40°-50°	2726.8	13.4
50°-60°	4597.5	22.6
60°-70°	7134.7	35.1
70°-80°	2506.8	12.3
80°-90°	141.7	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°	20308.5	100.0
0°-180°	20308.5	100.0



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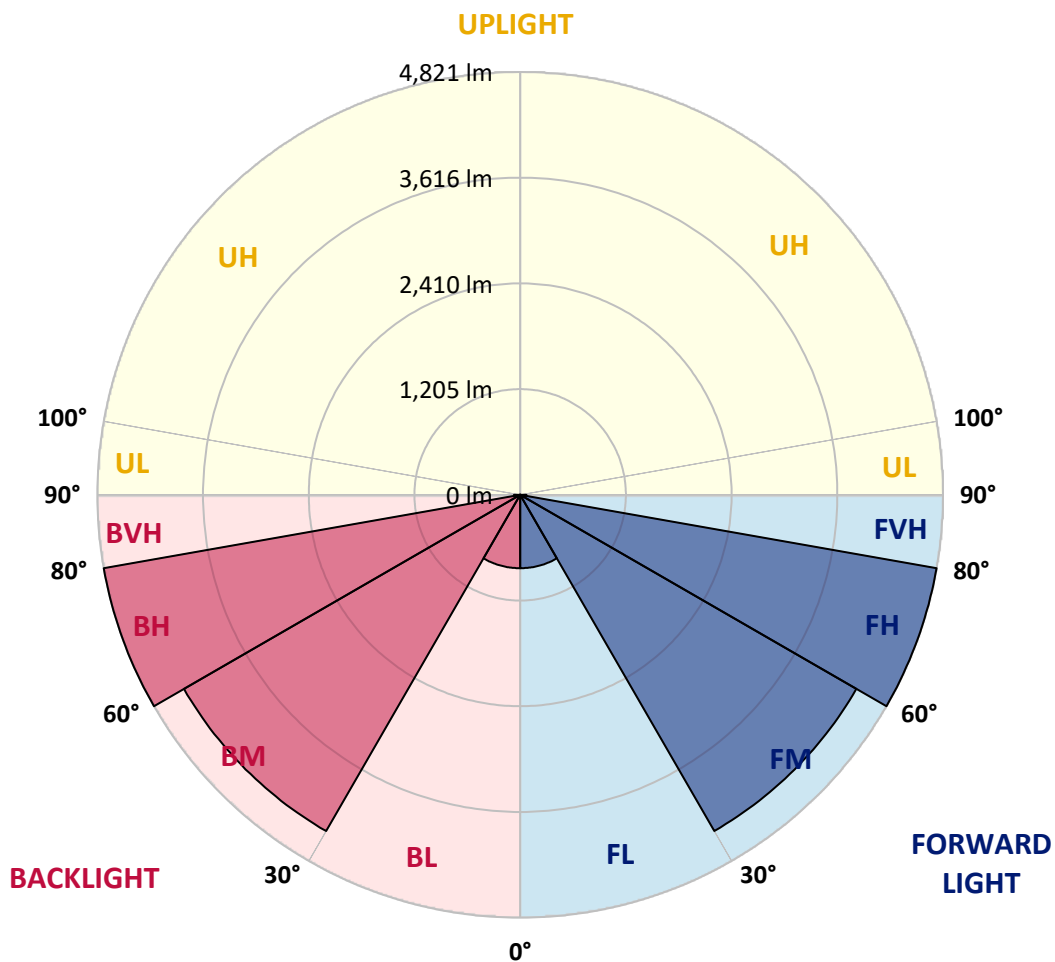
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	836.8	4.1			
FM	(30°-60°)	4425.9	21.8			
FH	(60°-80°)	4820.7	23.7			G2/5000
FVH	(80°-90°)	70.8	0.3			G1/100
BL	(0°-30°)	836.8	4.1	B2/1000		
BM	(30°-60°)	4425.9	21.8	B3/5000		
BH	(60°-80°)	4820.7	23.7	B4/5000		G2/5000
BVH	(80°-90°)	70.8	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°	2023.8	2023.8	2023.8	2023.8	2023.8	2023.8	2023.8	2023.8	2023.8	2023.8	2023.8
2.5°	2016.4	2018.2	2018.2	2018.2	2017.3	2017.3	2015.4	2017.3	2016.4	2013.6	2014.5
5°	1999.5	2001.4	2001.4	2000.5	2003.3	2002.3	1999.5	2001.4	2000.5	1998.6	1999.5
7.5°	1975.3	1978.1	1978.1	1977.1	1979.9	1979.0	1977.1	1978.1	1978.1	1975.3	1975.3
10°	1948.2	1950.0	1950.0	1949.1	1953.8	1953.8	1952.9	1955.7	1956.6	1953.8	1951.9
12.5°	1923.0	1925.8	1925.8	1929.5	1934.2	1936.0	1940.7	1944.4	1948.2	1947.2	1943.5
15°	1908.0	1909.9	1913.6	1918.3	1925.8	1932.3	1939.8	1948.2	1955.7	1957.5	1951.9
17.5°	1898.7	1901.5	1907.1	1913.6	1923.9	1935.1	1946.3	1957.5	1967.8	1971.5	1965.0
20°	1895.9	1897.7	1903.4	1914.6	1928.6	1945.4	1961.3	1974.3	1988.3	1993.0	1988.3
22.5°	1901.5	1905.2	1911.8	1924.8	1943.5	1965.0	1983.7	2001.4	2019.2	2027.6	2021.0
25°	1926.7	1930.4	1938.8	1955.7	1976.2	1998.6	2020.1	2040.6	2056.5	2064.9	2060.3
27.5°	1973.4	1978.1	1988.3	2005.2	2027.6	2051.8	2075.2	2092.0	2105.1	2107.9	2102.3
30°	2043.4	2053.7	2065.9	2084.5	2110.7	2131.2	2154.6	2169.5	2185.4	2185.4	2180.7
32.5°	2152.7	2163.0	2176.1	2193.8	2214.4	2236.8	2257.3	2270.4	2287.2	2288.1	2276.9
35°	2316.2	2320.8	2332.0	2343.2	2361.9	2381.5	2399.3	2407.7	2421.7	2422.6	2412.3
37.5°	2531.9	2532.8	2540.3	2544.0	2560.8	2582.3	2599.1	2604.7	2617.8	2615.9	2605.7
40°	2783.1	2787.8	2790.6	2796.2	2813.9	2834.5	2852.2	2855.0	2869.0	2866.2	2853.2
42.5°	3073.6	3075.4	3091.3	3099.7	3116.5	3126.8	3149.2	3152.0	3168.8	3161.4	3146.4
45°	3399.5	3416.3	3431.3	3448.1	3465.8	3478.0	3495.7	3492.0	3503.2	3492.0	3483.6
47.5°	3742.3	3754.4	3788.0	3814.2	3843.1	3853.4	3878.6	3867.4	3878.6	3862.7	3859.9
50°	4119.6	4141.1	4170.0	4199.9	4230.7	4247.5	4280.2	4266.2	4281.1	4266.2	4257.8
52.5°	4491.3	4496.9	4560.4	4604.3	4647.2	4666.9	4686.5	4679.9	4680.9	4679.9	4671.5
55°	4844.3	4857.4	4920.9	4980.7	5055.4	5110.5	5144.1	5140.4	5132.0	5123.5	5109.5
57.5°	5242.2	5255.2	5328.1	5401.9	5486.8	5565.3	5633.5	5703.5	5730.6	5738.1	5707.3
60°	5780.1	5779.2	5876.3	5966.0	6087.4	6204.1	6353.5	6505.8	6680.4	6761.7	6654.3
62.5°	6327.4	6349.8	6489.9	6648.7	6899.0	7142.7	7418.2	7689.1	7965.5	8190.6	7951.5
65°	6262.0	6347.9	6556.2	6915.8	7378.1	7927.2	8521.2	9149.7	9717.6	10107.9	9669.9
67.5°	5427.1	5549.4	5761.4	6198.5	6776.6	7568.6	8566.0	9809.1	11253.9	11952.5	11086.7
70°	3933.7	4071.9	4294.2	4721.0	5293.5	6046.3	7129.6	8622.1	10534.7	11238.9	10285.4
72.5°	1957.5	2032.2	2169.5	2441.3	2874.6	3485.4	4467.9	5902.4	7594.7	8241.0	7369.7
75°	665.0	699.5	722.9	811.6	948.9	1188.9	1677.3	2580.5	3936.5	4719.2	3880.5
77.5°	383.8	384.8	400.7	416.5	439.9	466.0	531.4	697.6	1206.6	1713.8	1248.7
80°	248.4	247.5	260.6	272.7	288.6	301.7	305.4	323.1	372.6	441.7	395.1
82.5°	128.9	144.8	173.7	189.6	219.5	225.1	217.6	211.1	223.2	231.6	237.2
85°	71.0	61.6	92.5	119.5	132.6	134.5	134.5	127.0	131.7	128.9	140.1
87.5°	32.7	29.9	36.4	58.8	62.6	53.2	56.0	49.5	35.5	34.6	39.2
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°	2023.8	2023.8	2023.8	2023.8	2023.8	2023.8	2023.8	2023.8
2.5°	2014.5	2015.4	2015.4	2018.2	2019.2	2021.0	2022.9	2023.8
5°	1998.6	2001.4	1999.5	2002.3	2002.3	2004.2	2004.2	2005.2
7.5°	1975.3	1978.1	1978.1	1978.1	1977.1	1979.9	1979.9	1979.9
10°	1951.0	1952.9	1951.9	1950.0	1948.2	1951.0	1950.0	1949.1
12.5°	1943.5	1938.8	1935.1	1933.2	1929.5	1930.4	1927.6	1927.6
15°	1948.2	1939.8	1933.2	1930.4	1926.7	1924.8	1923.0	1923.9
17.5°	1960.3	1950.0	1941.6	1937.0	1932.3	1929.5	1925.8	1926.7
20°	1981.8	1969.7	1957.5	1948.2	1939.8	1935.1	1932.3	1931.4
22.5°	2013.6	1995.8	1978.1	1964.1	1952.9	1946.3	1943.5	1941.6
25°	2050.0	2030.4	2009.8	1993.9	1982.7	1974.3	1968.7	1968.7
27.5°	2095.7	2079.9	2061.2	2042.5	2032.2	2023.8	2020.1	2018.2
30°	2172.3	2157.4	2142.4	2124.7	2111.6	2103.2	2096.7	2091.1
32.5°	2270.4	2258.2	2246.1	2233.0	2220.9	2209.7	2199.4	2194.7
35°	2408.6	2399.3	2390.9	2375.9	2371.3	2364.7	2359.1	2354.4
37.5°	2599.1	2595.4	2595.4	2579.5	2575.8	2573.0	2567.4	2568.3
40°	2849.4	2853.2	2848.5	2842.9	2840.1	2832.6	2832.6	2839.2
42.5°	3145.5	3148.3	3158.6	3149.2	3159.5	3150.2	3144.5	3149.2
45°	3489.2	3499.4	3520.0	3510.6	3517.2	3501.3	3481.7	3482.6
47.5°	3874.9	3884.2	3892.6	3886.1	3887.0	3860.9	3834.7	3828.2
50°	4275.5	4279.3	4283.9	4274.6	4276.5	4247.5	4217.6	4218.6
52.5°	4671.5	4689.3	4707.9	4682.7	4677.1	4644.4	4602.4	4585.6
55°	5124.5	5149.7	5128.2	5084.3	5040.4	4996.5	4941.4	4932.1
57.5°	5683.0	5640.0	5572.8	5489.7	5428.9	5367.3	5311.3	5287.9
60°	6460.0	6298.4	6177.0	6053.7	5976.2	5900.6	5826.8	5815.6
62.5°	7558.3	7279.1	7037.2	6782.2	6573.9	6411.4	6281.6	6245.2
65°	8934.9	8274.6	7702.1	7167.9	6703.8	6353.5	6133.1	6036.0
67.5°	9527.0	8223.3	7241.7	6483.4	5876.3	5452.3	5214.1	5095.5
70°	8371.8	6819.6	5752.1	4992.8	4439.9	3987.9	3772.2	3645.1
72.5°	5759.6	4338.1	3430.3	2799.9	2358.2	1979.9	1830.5	1819.3
75°	2586.1	1712.8	1180.5	909.6	765.8	665.9	635.1	611.7
77.5°	723.8	535.1	477.2	446.4	416.5	382.0	368.9	371.7
80°	352.1	332.5	319.4	299.8	272.7	243.8	230.7	236.3
82.5°	233.5	230.7	239.1	225.1	185.9	157.8	132.6	121.4
85°	142.0	143.8	146.6	147.6	125.1	87.8	59.8	67.2
87.5°	56.0	64.4	70.0	72.8	68.2	42.0	33.6	34.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)