

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: P299473

Luminaire Tested: **GLNA-AF-04-LED-E1-5NQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299473
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)
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-E1-5NQ-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14127.5 lumens
Efficiency: N/A
Efficacy: 109.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

Input Watts (W): 129
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

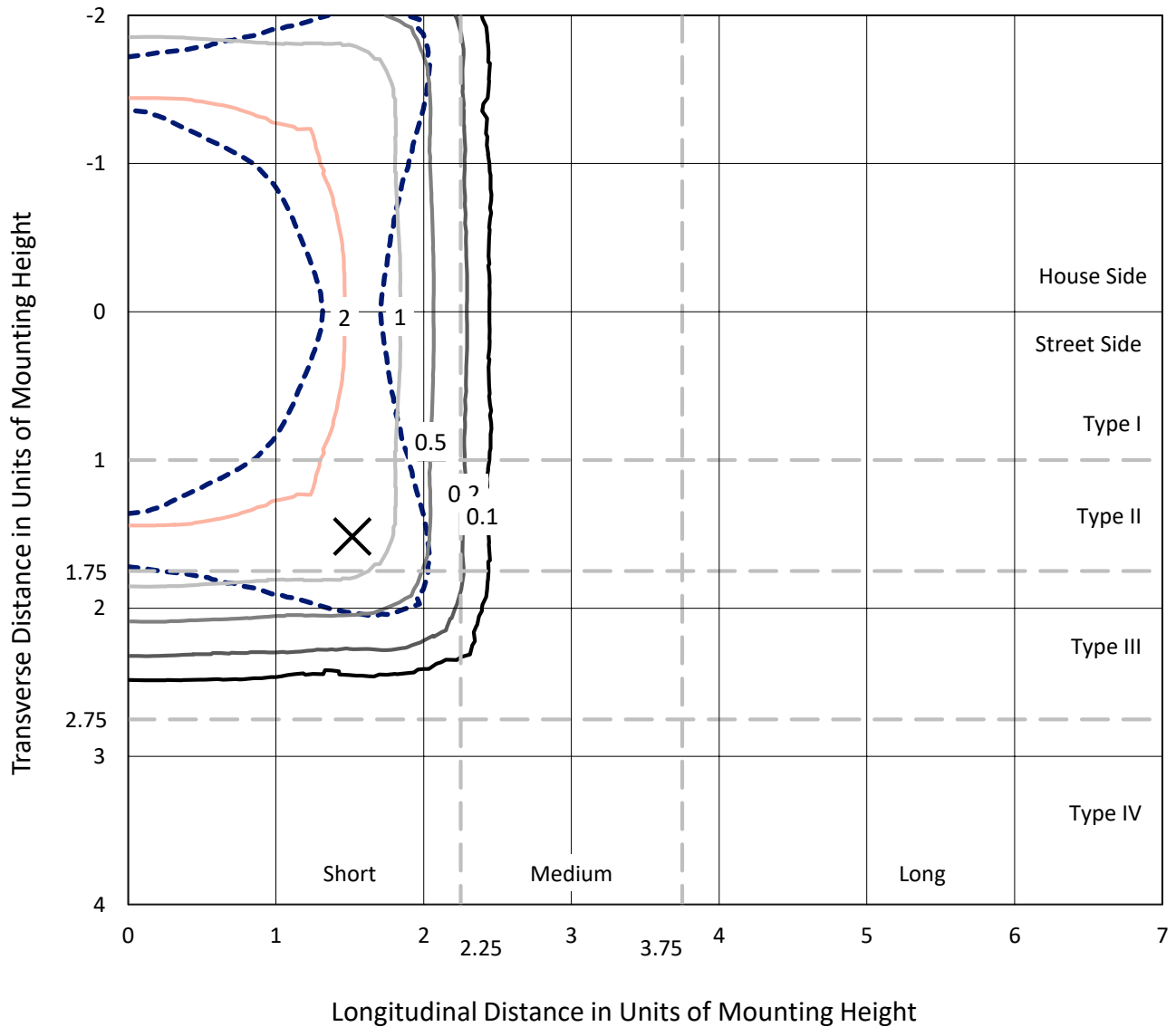


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Iso-Footcandle Lines of Horizontal Illumination

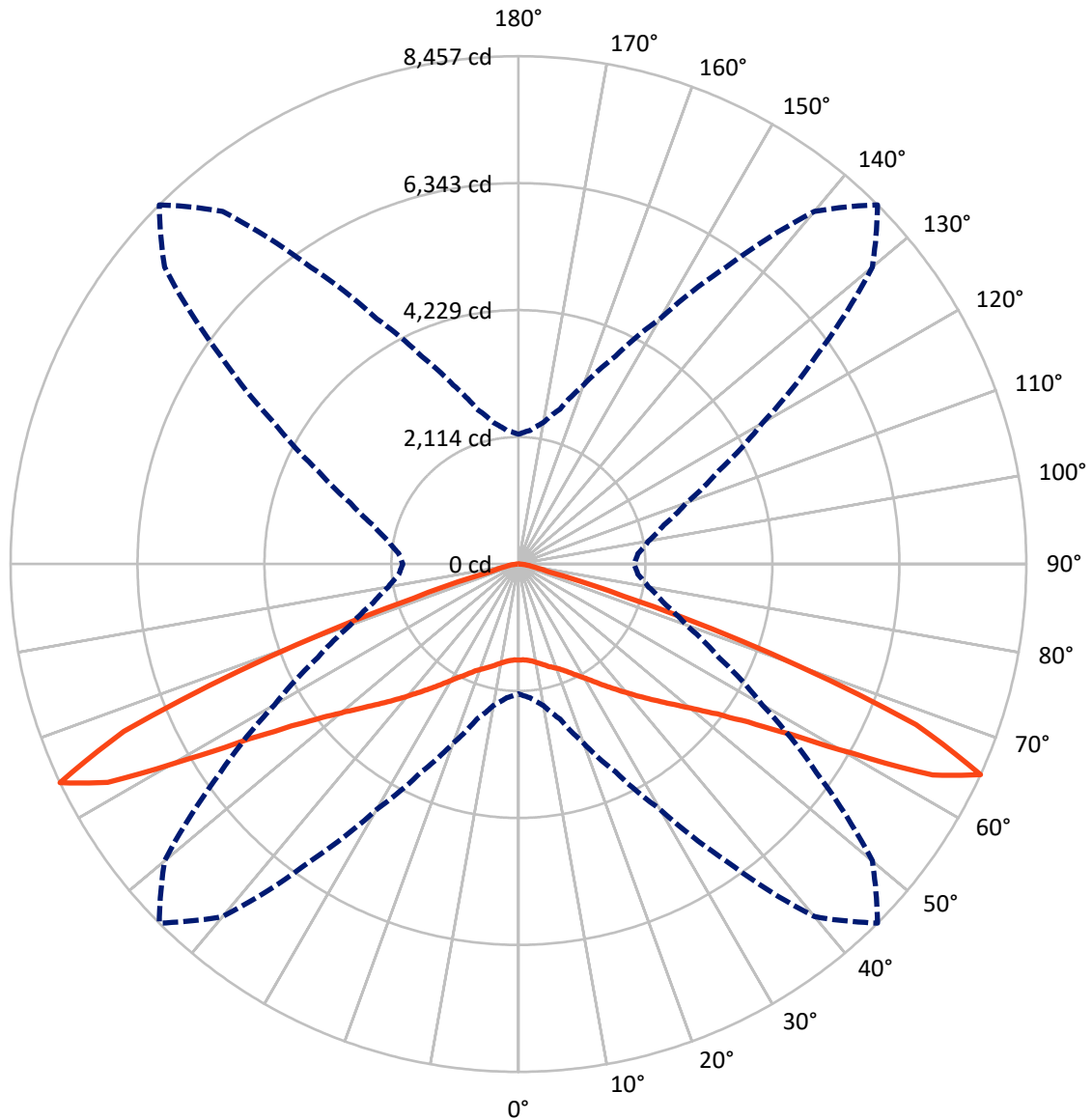
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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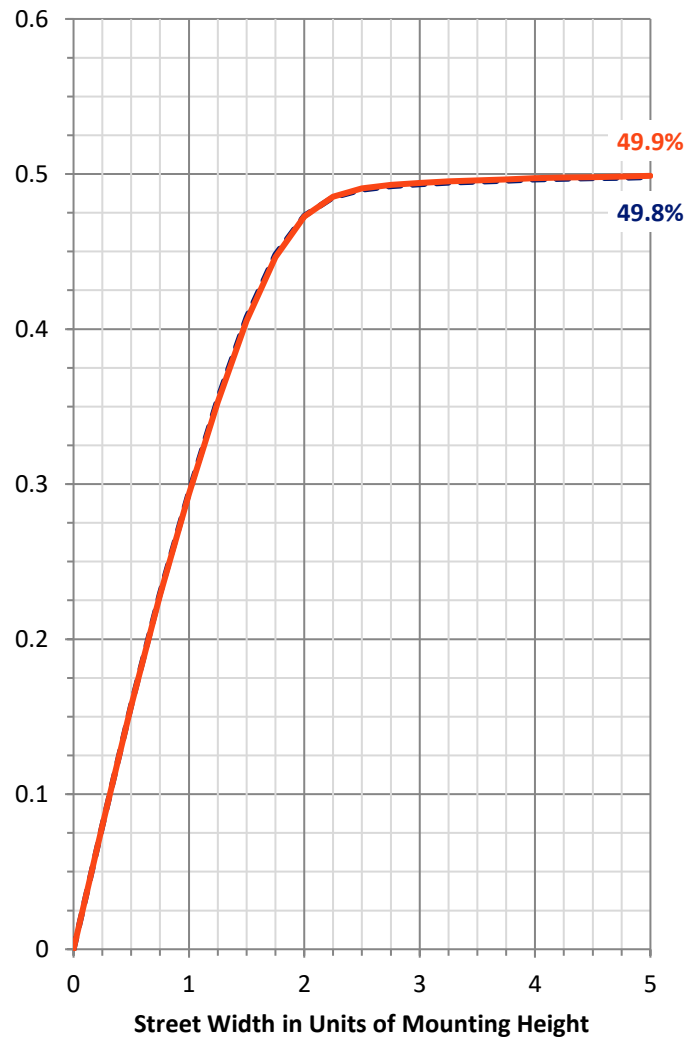
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7063.8	0.0	7063.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7063.8	0.0	7063.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	14127.5	0.0	14127.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.8	1.1
10°-20°	499.7	3.5
20°-30°	934.3	6.6
30°-40°	1580.2	11.2
40°-50°	2583.8	18.3
50°-60°	4108.7	29.1
60°-70°	3714.0	26.3
70°-80°	470.0	3.3
80°-90°	80.8	0.6
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°	14127.5	100.0
0°-180°	14127.5	100.0



--- HS — SS

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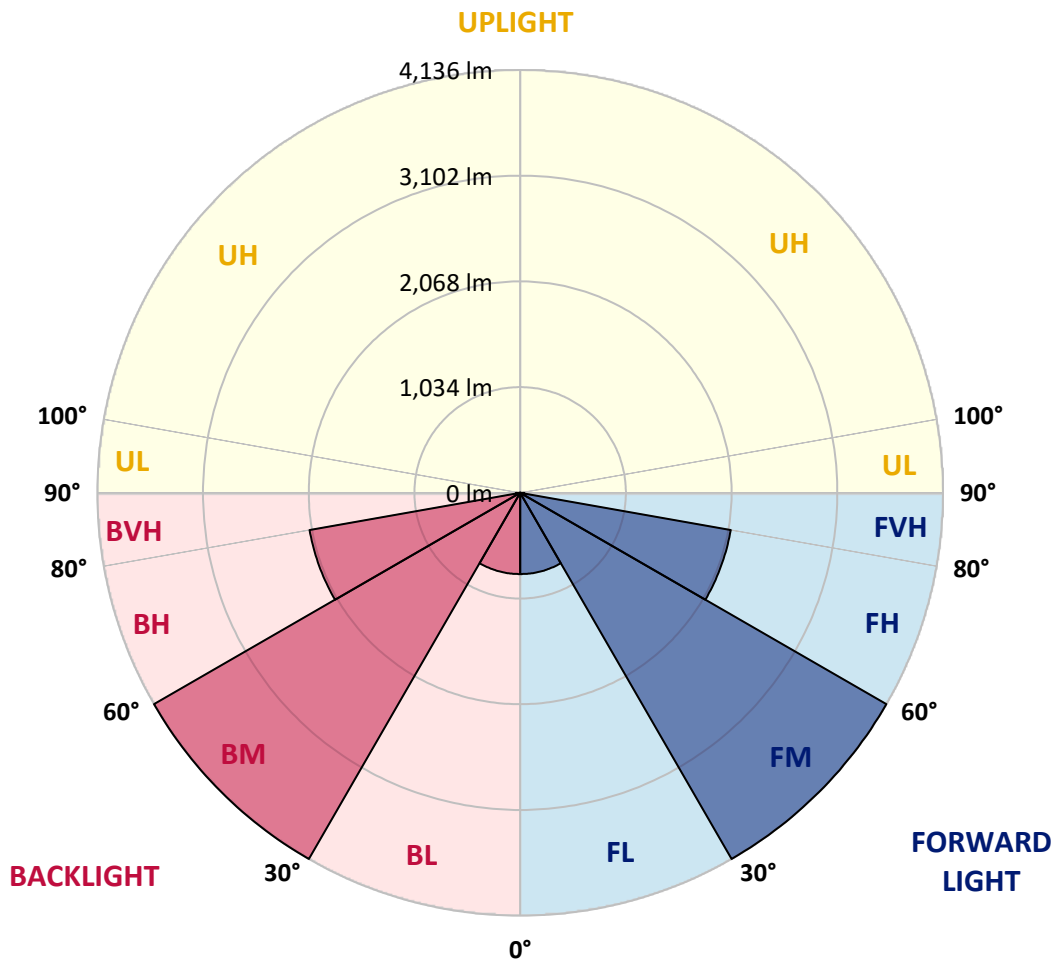
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	794.9	5.6			
FM	(30°-60°)	4136.4	29.3			
FH	(60°-80°)	2092.0	14.8			G2/5000
FVH	(80°-90°)	40.4	0.3			G1/100
BL	(0°-30°)	794.9	5.6	B2/1000		
BM	(30°-60°)	4136.4	29.3	B3/5000		
BH	(60°-80°)	2092.0	14.8	B3/2500		G2/5000
BVH	(80°-90°)	40.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5
2.5°	1599.9	1601.2	1602.5	1601.2	1602.5	1600.5	1599.2	1601.2	1599.2	1597.2	1598.5
5°	1613.8	1614.4	1614.4	1612.4	1614.4	1613.1	1611.1	1613.8	1611.8	1609.8	1611.1
7.5°	1636.9	1639.6	1637.6	1635.6	1636.9	1635.6	1634.3	1634.9	1634.3	1632.3	1632.9
10°	1668.0	1670.0	1668.7	1668.0	1669.3	1668.7	1667.3	1666.7	1667.3	1665.4	1665.4
12.5°	1705.7	1705.1	1704.4	1705.1	1707.0	1707.0	1706.4	1707.0	1708.4	1709.0	1707.7
15°	1742.8	1744.1	1744.1	1744.1	1748.1	1751.4	1753.4	1754.7	1757.3	1758.0	1755.3
17.5°	1789.1	1789.1	1788.4	1789.1	1793.1	1798.4	1800.3	1803.0	1805.6	1807.6	1804.3
20°	1840.7	1842.0	1842.0	1843.3	1848.6	1854.6	1854.6	1855.9	1854.6	1855.9	1853.9
22.5°	1903.6	1907.5	1907.5	1908.2	1913.5	1920.8	1918.8	1920.8	1917.5	1920.1	1917.5
25°	1985.6	1991.6	1990.2	1990.2	1994.2	1998.8	1999.5	2003.5	2002.8	2006.1	2004.1
27.5°	2078.2	2087.5	2090.1	2089.5	2092.1	2096.8	2098.1	2102.7	2100.1	2102.7	2101.4
30°	2189.4	2193.4	2198.6	2200.6	2203.9	2208.6	2208.6	2209.2	2205.9	2209.9	2211.9
32.5°	2304.5	2311.8	2317.1	2329.0	2334.9	2338.3	2337.6	2338.9	2335.6	2340.9	2344.9
35°	2456.7	2462.0	2470.6	2479.8	2487.8	2487.1	2485.1	2485.8	2485.8	2490.4	2494.4
37.5°	2640.0	2641.3	2652.5	2665.8	2669.7	2665.8	2653.9	2651.2	2645.3	2651.2	2657.8
40°	2833.8	2838.5	2861.0	2869.6	2871.5	2864.3	2847.1	2837.1	2823.9	2831.2	2840.4
42.5°	3037.0	3046.2	3066.7	3081.9	3088.6	3083.9	3060.1	3044.9	3027.7	3031.7	3040.9
45°	3261.9	3273.2	3302.3	3316.8	3329.4	3322.1	3299.0	3275.8	3248.7	3250.7	3265.2
47.5°	3513.3	3524.6	3562.3	3586.8	3593.4	3592.1	3566.3	3534.5	3497.5	3496.1	3508.7
50°	3795.2	3806.4	3853.4	3891.1	3910.3	3908.3	3877.9	3832.9	3787.9	3788.6	3804.5
52.5°	4070.4	4084.3	4133.3	4198.1	4235.9	4263.0	4244.5	4202.1	4147.2	4148.5	4163.1
55°	4328.5	4351.6	4407.9	4495.9	4566.0	4642.1	4663.9	4662.6	4629.5	4638.8	4653.4
57.5°	4453.5	4487.9	4574.6	4713.6	4856.5	5011.3	5142.3	5240.2	5281.9	5344.8	5330.2
60°	4216.7	4271.6	4399.3	4603.7	4886.3	5209.1	5555.2	5893.3	6181.8	6399.4	6274.4
62.5°	3452.5	3523.9	3678.8	3940.8	4368.2	4884.9	5547.2	6346.5	7217.2	7742.6	7367.4
65°	2160.3	2234.4	2391.9	2672.4	3172.6	3815.1	4713.6	6038.2	7665.2	8457.2	7693.6
67.5°	842.3	882.6	968.0	1147.3	1523.1	2094.8	2996.6	4499.9	6445.8	7139.8	6326.0
70°	422.1	426.1	442.0	475.1	555.8	721.9	1098.3	2086.2	3696.6	4464.8	3563.6
72.5°	305.0	305.7	313.6	328.2	354.0	391.0	462.5	638.5	1202.2	1837.4	1126.8
75°	233.6	236.2	240.8	248.8	262.7	281.2	307.0	367.9	455.9	528.7	444.6
77.5°	180.0	185.3	188.6	195.8	204.4	217.0	224.3	247.5	287.8	303.0	298.4
80°	137.0	141.6	148.9	154.8	160.8	166.7	164.1	174.7	195.8	208.4	201.8
82.5°	87.3	92.6	113.8	119.1	121.7	125.7	121.1	121.7	131.0	138.9	131.0
85°	56.2	59.5	72.1	78.7	79.4	82.0	80.1	75.4	75.4	68.8	77.4
87.5°	25.8	26.5	32.4	38.4	39.7	35.7	35.1	33.7	27.1	25.8	27.8
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°	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5
2.5°	1597.9	1599.2	1599.9	1601.8	1602.5	1602.5	1603.2	1604.5
5°	1610.4	1612.4	1613.1	1615.7	1616.4	1615.7	1617.1	1617.7
7.5°	1632.9	1636.3	1637.6	1640.2	1638.2	1640.9	1641.5	1641.5
10°	1666.0	1669.3	1670.0	1672.6	1671.3	1672.6	1672.6	1671.3
12.5°	1709.7	1710.4	1708.4	1710.4	1707.7	1709.0	1707.0	1705.7
15°	1758.0	1756.0	1751.4	1751.4	1747.4	1748.1	1747.4	1746.7
17.5°	1805.0	1801.0	1797.7	1796.4	1793.1	1792.4	1790.4	1790.4
20°	1856.6	1854.6	1852.6	1850.0	1846.7	1843.3	1842.7	1844.0
22.5°	1918.8	1918.1	1918.1	1916.8	1912.2	1908.8	1906.9	1906.9
25°	2002.1	1996.2	1996.2	1995.5	1993.5	1991.6	1987.6	1989.6
27.5°	2096.1	2092.8	2095.4	2094.8	2092.8	2092.8	2090.1	2090.1
30°	2211.9	2210.6	2214.5	2211.2	2204.6	2203.9	2201.3	2198.0
32.5°	2345.5	2344.2	2350.2	2346.2	2335.6	2329.7	2324.4	2321.7
35°	2494.4	2495.1	2502.3	2499.7	2487.8	2483.8	2474.6	2473.2
37.5°	2657.2	2667.8	2680.3	2683.0	2673.1	2670.4	2660.5	2655.2
40°	2848.4	2862.3	2881.5	2886.1	2875.5	2873.5	2859.6	2852.4
42.5°	3052.2	3076.0	3099.8	3103.8	3093.2	3082.6	3069.4	3064.1
45°	3279.8	3308.2	3339.3	3347.3	3331.4	3318.8	3301.6	3301.6
47.5°	3535.2	3570.9	3606.0	3627.8	3613.2	3600.0	3579.5	3566.3
50°	3836.9	3885.8	3931.5	3954.0	3930.8	3905.7	3870.0	3858.1
52.5°	4215.3	4268.3	4308.0	4296.1	4260.3	4225.3	4186.2	4170.4
55°	4698.3	4716.2	4716.2	4671.2	4599.8	4540.9	4479.3	4458.8
57.5°	5302.4	5233.6	5127.8	4993.4	4824.7	4677.8	4578.6	4531.6
60°	6012.4	5681.6	5307.7	4940.5	4638.8	4390.0	4242.5	4175.0
62.5°	6485.5	5620.0	4871.0	4281.5	3847.5	3547.7	3344.0	3264.6
65°	6061.3	4687.1	3684.0	2978.7	2505.7	2200.6	1998.8	1924.7
67.5°	4439.6	2937.0	1961.8	1406.0	1030.2	821.8	739.1	704.7
70°	1992.9	1034.2	633.9	494.9	426.8	391.7	376.5	371.2
72.5°	600.8	434.7	366.6	330.8	303.7	286.5	273.9	272.6
75°	362.6	301.7	268.0	246.8	229.6	215.7	209.1	207.1
77.5°	253.4	221.7	205.8	190.6	177.3	166.7	160.8	156.1
80°	178.0	162.8	155.5	146.9	138.3	128.4	119.8	115.8
82.5°	119.1	115.8	115.8	110.5	103.2	94.0	76.8	72.8
85°	76.8	76.1	77.4	75.4	70.1	60.2	49.6	47.0
87.5°	35.7	36.4	40.4	39.7	38.4	31.8	25.1	23.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)