

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: P299716

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299716
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-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16560 lumens
Efficiency: N/A
Efficacy: 128.4 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): 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

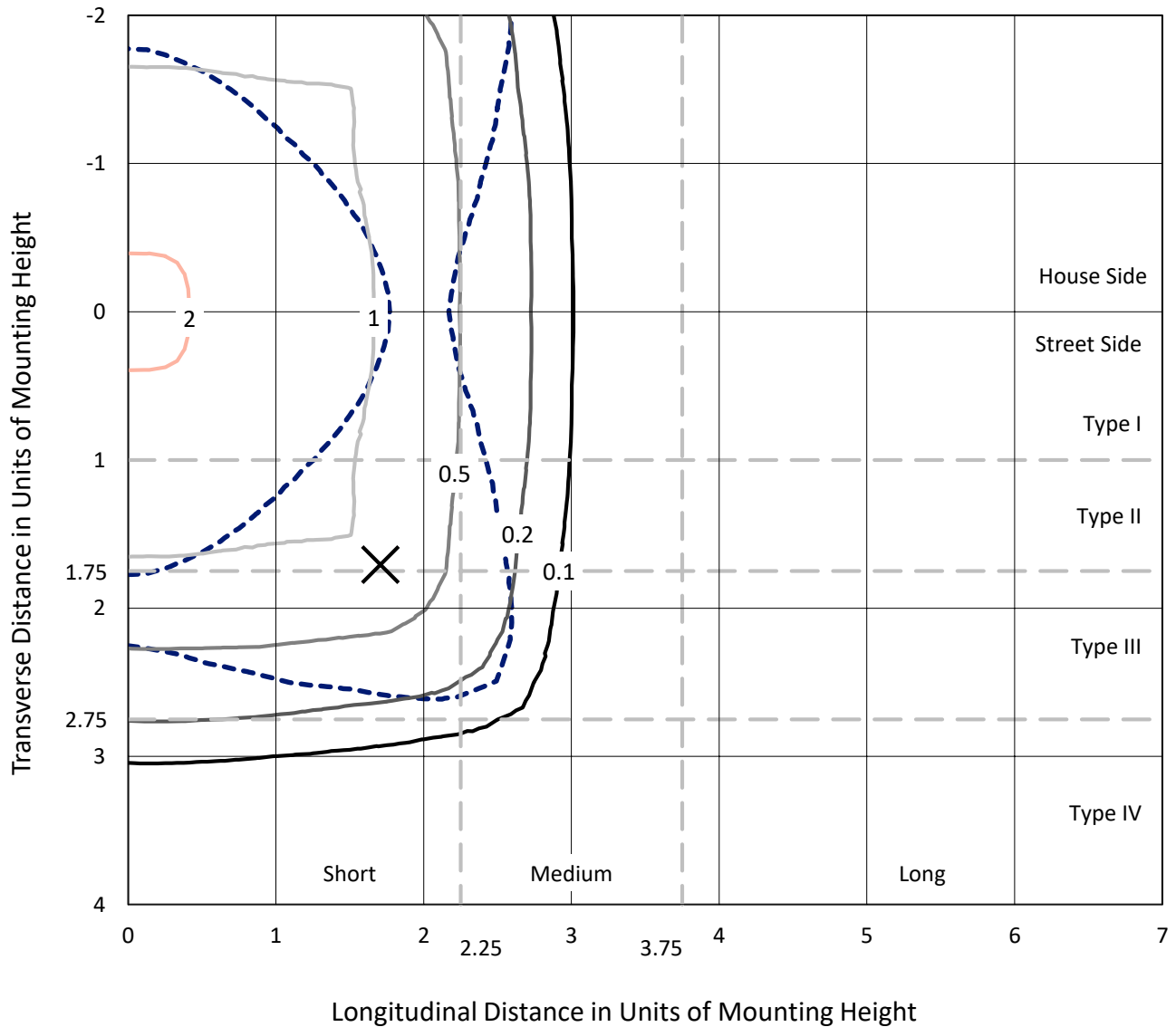


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

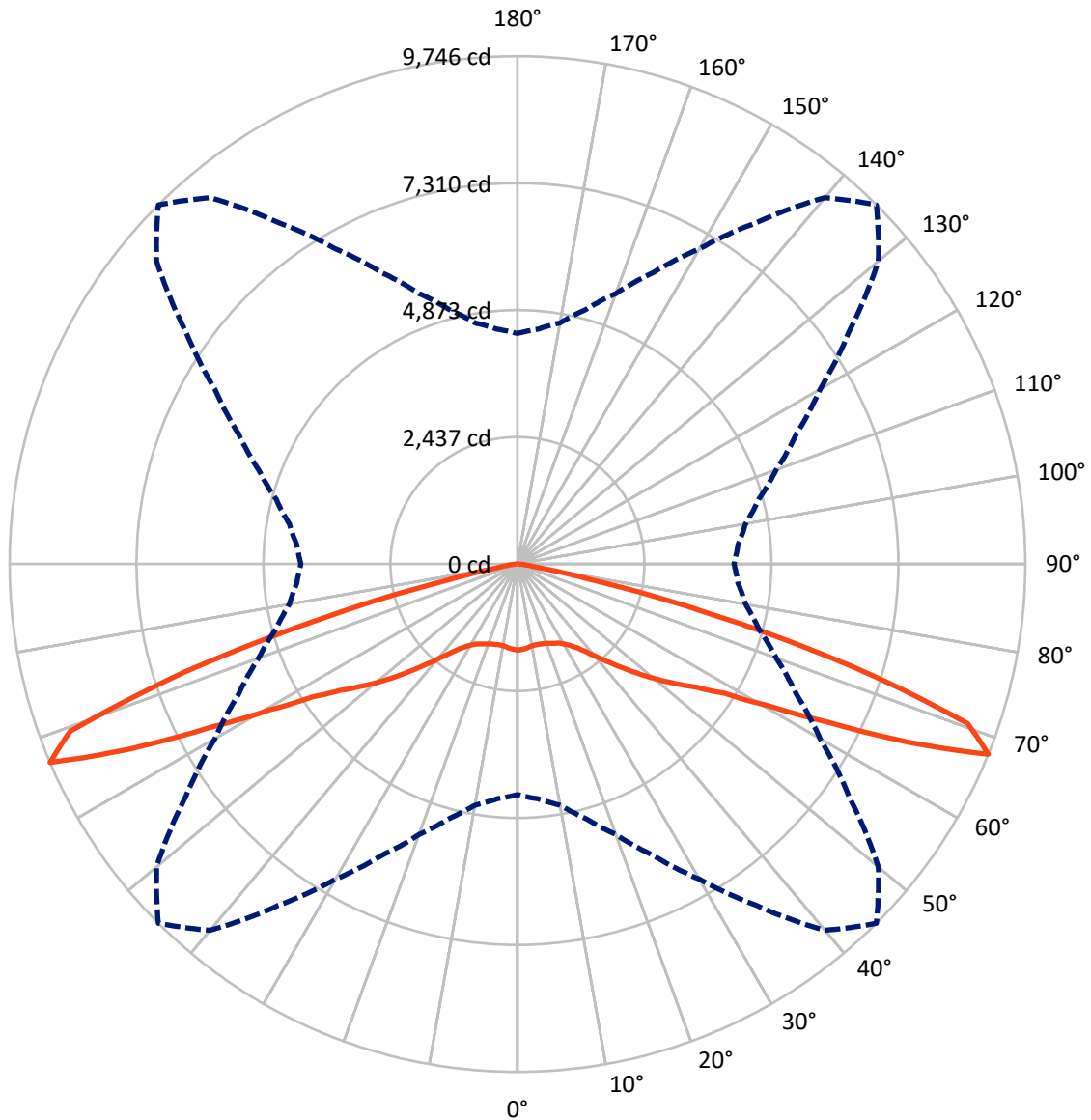


Based on 25 foot mounting height. Maximum calculated value = 2.6 fc
 Type V - Short - Full Cutoff

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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	8280.0	0.0	8280.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8280.0	0.0	8280.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	16560.0	0.0	16560.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.5	0.9
10°-20°	448.2	2.7
20°-30°	761.9	4.6
30°-40°	1245.5	7.5
40°-50°	2223.5	13.4
50°-60°	3748.9	22.6
60°-70°	5817.8	35.1
70°-80°	2044.1	12.3
80°-90°	115.5	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°	16560.0	100.0
0°-180°	16560.0	100.0



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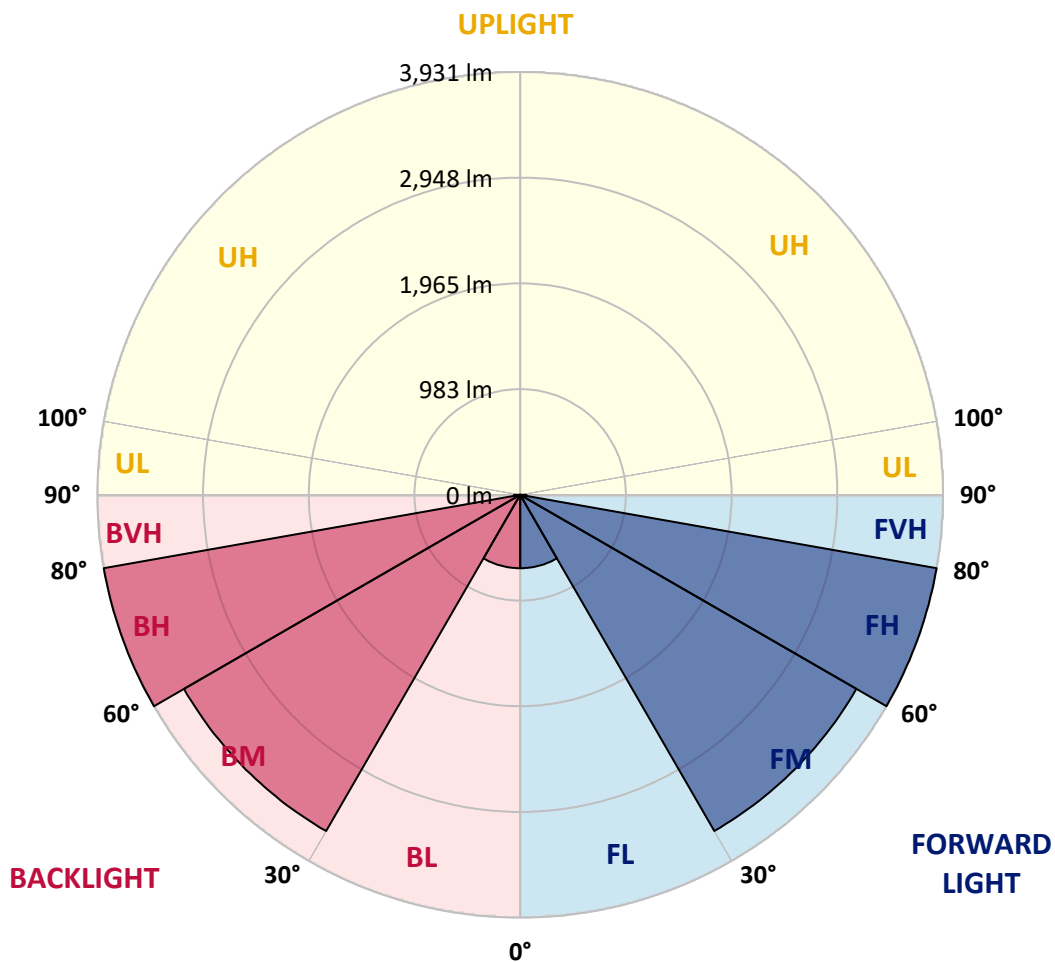
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	682.3	4.1			
FM	(30°-60°)	3609.0	21.8			
FH	(60°-80°)	3930.9	23.7			G2/5000
FVH	(80°-90°)	57.8	0.3			G1/100
BL	(0°-30°)	682.3	4.1	B2/1000		
BM	(30°-60°)	3609.0	21.8	B3/5000		
BH	(60°-80°)	3930.9	23.7	B4/5000		G2/5000
BVH	(80°-90°)	57.8	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°	1650.3	1650.3	1650.3	1650.3	1650.3	1650.3	1650.3	1650.3	1650.3	1650.3	1650.3
2.5°	1644.2	1645.7	1645.7	1645.7	1644.9	1644.9	1643.4	1644.9	1644.2	1641.9	1642.7
5°	1630.5	1632.0	1632.0	1631.2	1633.5	1632.8	1630.5	1632.0	1631.2	1629.7	1630.5
7.5°	1610.7	1613.0	1613.0	1612.2	1614.5	1613.7	1612.2	1613.0	1613.0	1610.7	1610.7
10°	1588.6	1590.1	1590.1	1589.4	1593.2	1593.2	1592.4	1594.7	1595.4	1593.2	1591.6
12.5°	1568.0	1570.3	1570.3	1573.4	1577.2	1578.7	1582.5	1585.5	1588.6	1587.8	1584.8
15°	1555.8	1557.4	1560.4	1564.2	1570.3	1575.6	1581.7	1588.6	1594.7	1596.2	1591.6
17.5°	1548.2	1550.5	1555.1	1560.4	1568.8	1577.9	1587.1	1596.2	1604.6	1607.6	1602.3
20°	1545.9	1547.5	1552.0	1561.2	1572.6	1586.3	1599.3	1609.9	1621.3	1625.1	1621.3
22.5°	1550.5	1553.6	1558.9	1569.6	1584.8	1602.3	1617.5	1632.0	1646.5	1653.3	1648.0
25°	1571.1	1574.1	1581.0	1594.7	1611.4	1629.7	1647.2	1664.0	1676.9	1683.8	1680.0
27.5°	1609.2	1613.0	1621.3	1635.0	1653.3	1673.1	1692.2	1705.9	1716.5	1718.8	1714.2
30°	1666.3	1674.6	1684.5	1699.8	1721.1	1737.9	1756.9	1769.1	1782.0	1782.0	1778.2
32.5°	1755.4	1763.7	1774.4	1788.9	1805.6	1823.9	1840.7	1851.3	1865.0	1865.8	1856.7
35°	1888.6	1892.4	1901.6	1910.7	1926.0	1941.9	1956.4	1963.3	1974.7	1975.5	1967.1
37.5°	2064.6	2065.3	2071.4	2074.5	2088.2	2105.7	2119.4	2124.0	2134.6	2133.1	2124.7
40°	2269.4	2273.2	2275.5	2280.1	2294.5	2311.3	2325.8	2328.1	2339.5	2337.2	2326.5
42.5°	2506.3	2507.8	2520.7	2527.6	2541.3	2549.7	2567.9	2570.2	2583.9	2577.8	2565.7
45°	2772.0	2785.7	2797.9	2811.6	2826.1	2836.0	2850.5	2847.4	2856.6	2847.4	2840.6
47.5°	3051.5	3061.4	3088.8	3110.2	3133.8	3142.1	3162.7	3153.6	3162.7	3149.8	3147.5
50°	3359.2	3376.7	3400.3	3424.7	3449.8	3463.5	3490.2	3478.8	3490.9	3478.8	3471.9
52.5°	3662.3	3666.9	3718.6	3754.4	3789.5	3805.5	3821.4	3816.1	3816.9	3816.1	3809.3
55°	3950.2	3960.8	4012.6	4061.3	4122.3	4167.2	4194.6	4191.6	4184.7	4177.9	4166.4
57.5°	4274.6	4285.2	4344.6	4404.8	4474.1	4538.1	4593.7	4650.8	4672.9	4679.0	4653.8
60°	4713.2	4712.5	4791.7	4864.8	4963.8	5059.0	5180.8	5304.9	5447.4	5513.6	5426.0
62.5°	5159.5	5177.8	5292.0	5421.5	5625.6	5824.3	6049.0	6269.8	6495.2	6678.8	6483.8
65°	5106.2	5176.2	5346.1	5639.3	6016.2	6464.0	6948.4	7460.9	7923.9	8242.2	7885.1
67.5°	4425.4	4525.1	4698.0	5054.4	5525.8	6171.6	6984.9	7998.5	9176.7	9746.3	9040.3
70°	3207.6	3320.4	3501.6	3849.6	4316.5	4930.3	5813.7	7030.6	8590.3	9164.5	8386.9
72.5°	1596.2	1657.1	1769.1	1990.7	2344.0	2842.1	3643.2	4813.0	6192.9	6719.9	6009.4
75°	542.2	570.4	589.4	661.8	773.7	969.5	1367.7	2104.2	3209.9	3848.1	3164.2
77.5°	313.0	313.8	326.7	339.7	358.7	380.0	433.3	568.9	983.9	1397.4	1018.2
80°	202.6	201.8	212.5	222.4	235.3	246.0	249.0	263.5	303.9	360.2	322.1
82.5°	105.1	118.0	141.6	154.6	179.0	183.5	177.4	172.1	182.0	188.9	193.4
85°	57.9	50.3	75.4	97.5	108.1	109.7	109.7	103.6	107.4	105.1	114.2
87.5°	26.7	24.4	29.7	48.0	51.0	43.4	45.7	40.4	28.9	28.2	32.0
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°	1650.3	1650.3	1650.3	1650.3	1650.3	1650.3	1650.3	1650.3
2.5°	1642.7	1643.4	1643.4	1645.7	1646.5	1648.0	1649.5	1650.3
5°	1629.7	1632.0	1630.5	1632.8	1632.8	1634.3	1634.3	1635.0
7.5°	1610.7	1613.0	1613.0	1613.0	1612.2	1614.5	1614.5	1614.5
10°	1590.9	1592.4	1591.6	1590.1	1588.6	1590.9	1590.1	1589.4
12.5°	1584.8	1581.0	1577.9	1576.4	1573.4	1574.1	1571.8	1571.8
15°	1588.6	1581.7	1576.4	1574.1	1571.1	1569.6	1568.0	1568.8
17.5°	1598.5	1590.1	1583.3	1579.5	1575.6	1573.4	1570.3	1571.1
20°	1616.0	1606.1	1596.2	1588.6	1581.7	1577.9	1575.6	1574.9
22.5°	1641.9	1627.4	1613.0	1601.5	1592.4	1587.1	1584.8	1583.3
25°	1671.6	1655.6	1638.9	1625.9	1616.8	1609.9	1605.3	1605.3
27.5°	1708.9	1696.0	1680.7	1665.5	1657.1	1650.3	1647.2	1645.7
30°	1771.4	1759.2	1747.0	1732.5	1721.9	1715.0	1709.7	1705.1
32.5°	1851.3	1841.4	1831.5	1820.9	1811.0	1801.8	1793.4	1789.6
35°	1964.0	1956.4	1949.6	1937.4	1933.6	1928.2	1923.7	1919.9
37.5°	2119.4	2116.3	2116.3	2103.4	2100.4	2098.1	2093.5	2094.3
40°	2323.5	2326.5	2322.7	2318.2	2315.9	2309.8	2309.8	2315.1
42.5°	2564.9	2567.2	2575.6	2567.9	2576.3	2568.7	2564.1	2567.9
45°	2845.1	2853.5	2870.3	2862.7	2868.0	2855.0	2839.1	2839.8
47.5°	3159.7	3167.3	3174.1	3168.8	3169.6	3148.2	3126.9	3121.6
50°	3486.4	3489.4	3493.2	3485.6	3487.1	3463.5	3439.2	3439.9
52.5°	3809.3	3823.7	3839.0	3818.4	3813.8	3787.2	3752.9	3739.2
55°	4178.6	4199.2	4181.7	4145.9	4110.1	4074.3	4029.4	4021.7
57.5°	4634.0	4599.0	4544.2	4476.4	4426.9	4376.6	4330.9	4311.9
60°	5267.6	5135.9	5036.9	4936.4	4873.1	4811.5	4751.3	4742.2
62.5°	6163.2	5935.5	5738.3	5530.4	5360.5	5228.0	5122.2	5092.5
65°	7285.7	6747.3	6280.5	5844.9	5466.4	5180.8	5001.1	4921.9
67.5°	7768.6	6705.4	5905.0	5286.7	4791.7	4445.9	4251.7	4155.0
70°	6826.5	5560.8	4690.4	4071.2	3620.4	3251.8	3075.9	2972.3
72.5°	4696.5	3537.4	2797.2	2283.1	1922.9	1614.5	1492.6	1483.5
75°	2108.7	1396.7	962.6	741.7	624.5	543.0	517.9	498.8
77.5°	590.2	436.4	389.2	364.0	339.7	311.5	300.8	303.1
80°	287.1	271.1	260.4	244.5	222.4	198.8	188.1	192.7
82.5°	190.4	188.1	195.0	183.5	151.5	128.7	108.1	99.0
85°	115.8	117.3	119.6	120.3	102.0	71.6	48.7	54.8
87.5°	45.7	52.5	57.1	59.4	55.6	34.3	27.4	28.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)