

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: P299896

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299896
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
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-E1-5WQ-800
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20361.1 lumens
Efficiency: N/A
Efficacy: 119.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G3

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

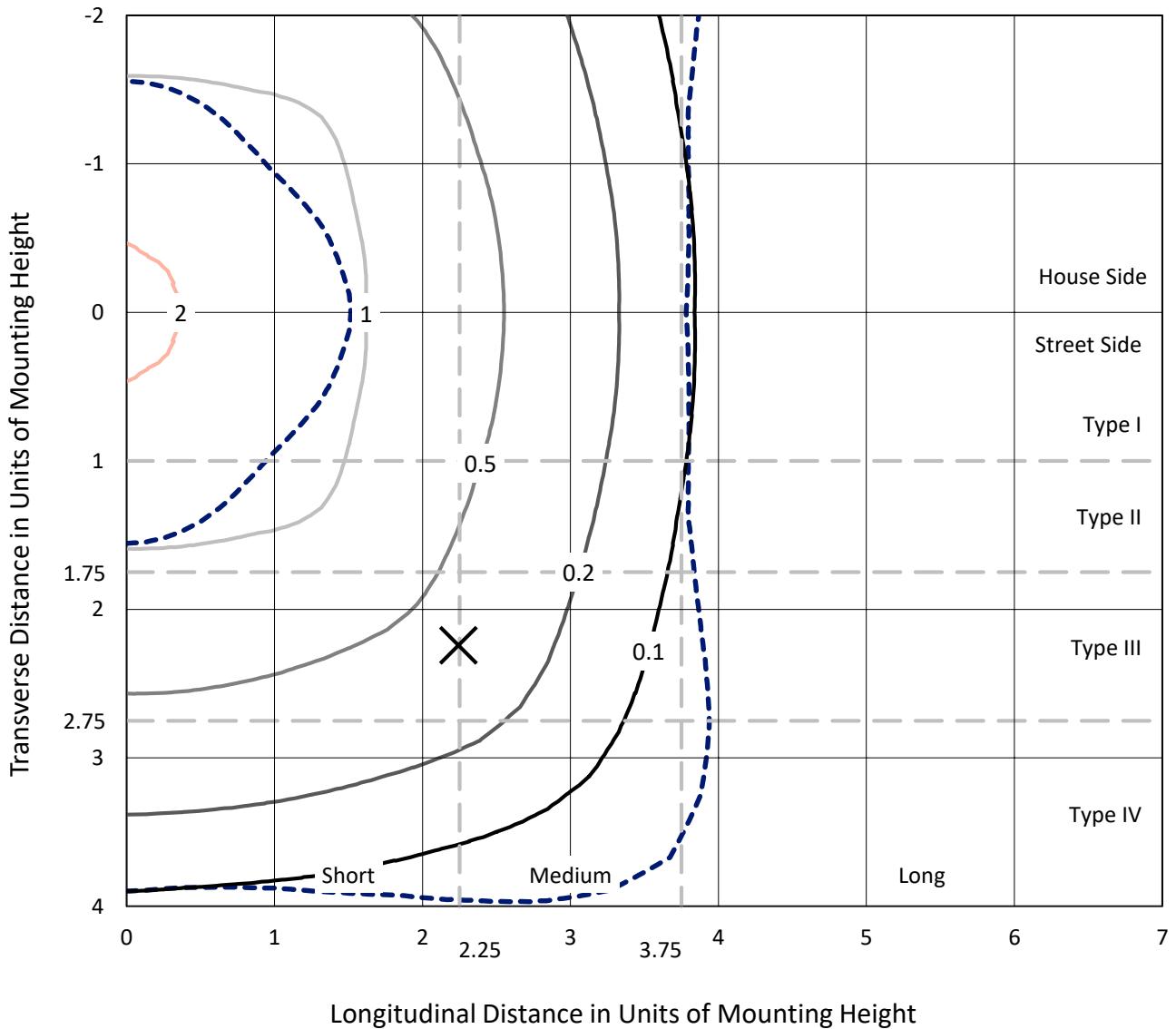


REPORT NUMBER: P299896

CATALOG NUMBER: GLNA-AF-04-LED-E1-5WQ-800

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

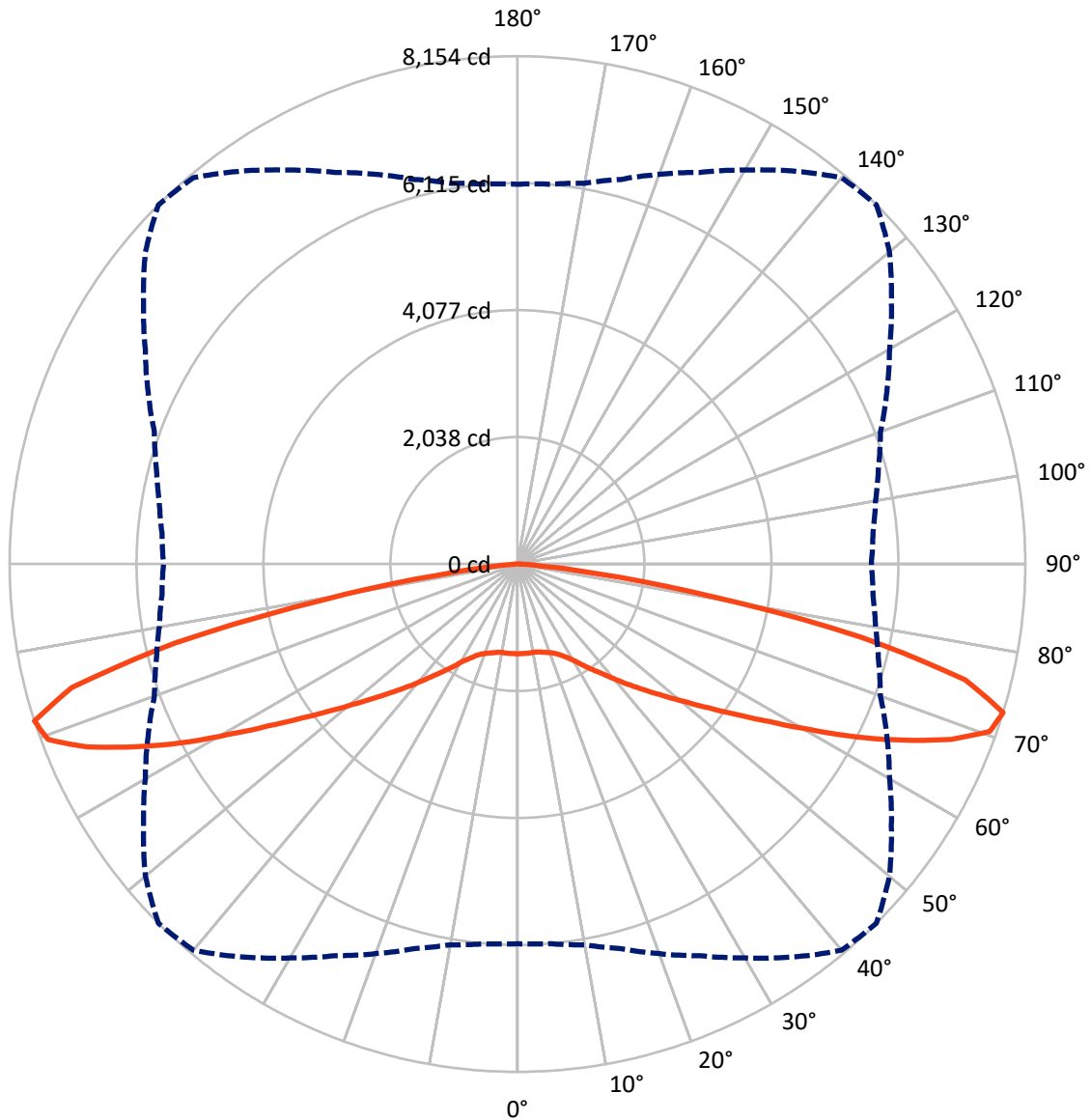


Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P299896

CATALOG NUMBER: GLNA-AF-04-LED-E1-5WQ-800

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P299896

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10180.5	0.0	10180.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10180.5	0.0	10180.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	20361.1	0.0	20361.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.7	0.7
10°-20°	418.2	2.1
20°-30°	764.1	3.8
30°-40°	1317.5	6.5
40°-50°	2252.3	11.1
50°-60°	3650.7	17.9
60°-70°	6056.3	29.7
70°-80°	5334.2	26.2
80°-90°	430.1	2.1
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°	20361.1	100.0
0°-180°	20361.1	100.0



REPORT NUMBER: P299896

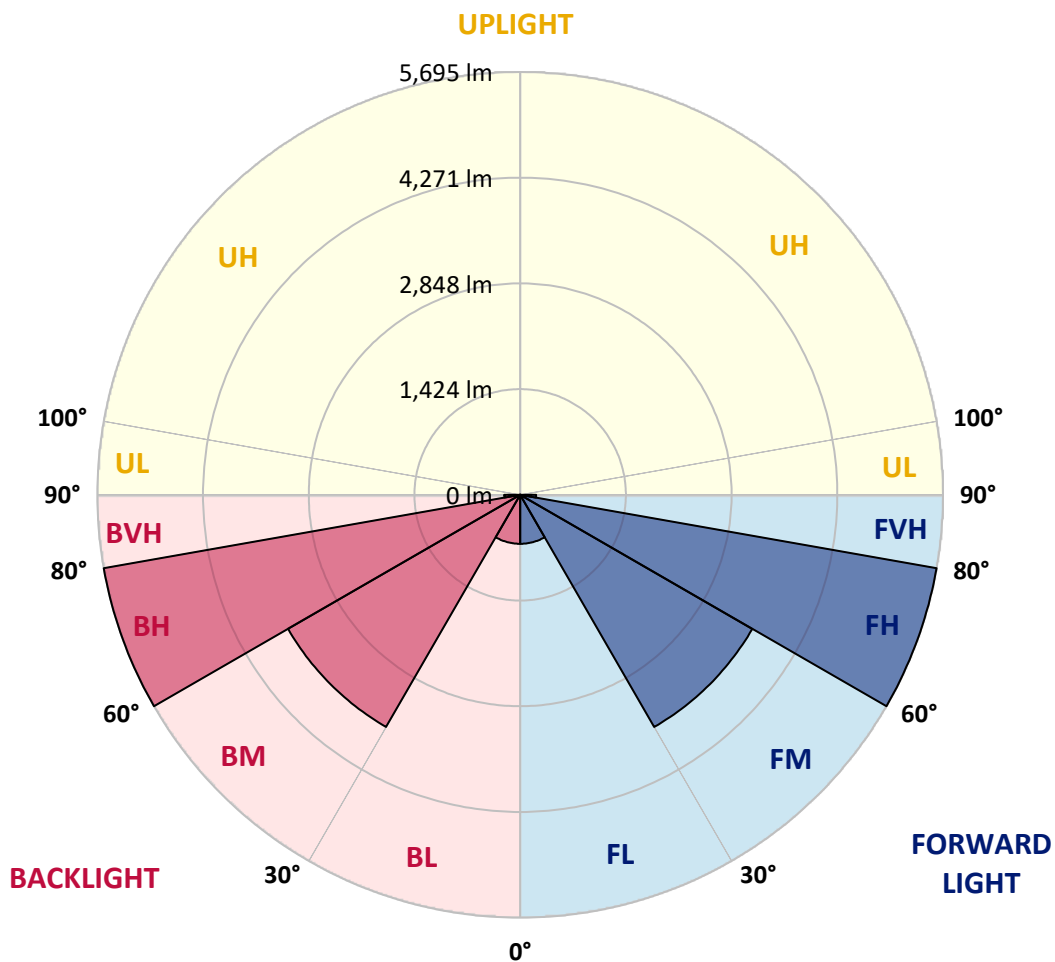
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	660.0	3.2			
FM	(30°-60°)	3610.2	17.7			
FH	(60°-80°)	5695.3	28.0			G3/7500
FVH	(80°-90°)	215.0	1.1			G2/225
BL	(0°-30°)	660.0	3.2	B2/1000		
BM	(30°-60°)	3610.2	17.7	B3/5000		
BH	(60°-80°)	5695.3	28.0	B5		G3/7500
BVH	(80°-90°)	215.0	1.1			G2/225
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





REPORT NUMBER: P299896

CATALOG NUMBER: GLNA-AF-04-LED-E1-5WQ-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1441.9	1441.9	1441.9	1441.9	1441.9	1441.9	1441.9	1441.9	1441.9	1441.9	1441.9
2.5°	1441.9	1442.8	1443.7	1442.8	1442.8	1441.9	1440.9	1441.9	1440.9	1439.1	1440.0
5°	1446.5	1448.4	1448.4	1446.5	1447.5	1446.5	1444.7	1445.6	1443.7	1440.9	1440.9
7.5°	1452.2	1453.1	1453.1	1451.2	1452.2	1450.3	1448.4	1447.5	1445.6	1441.9	1439.1
10°	1460.6	1461.5	1460.6	1458.7	1458.7	1455.9	1451.2	1449.3	1445.6	1440.0	1437.2
12.5°	1469.9	1470.8	1469.9	1468.0	1467.1	1462.4	1458.7	1455.9	1453.1	1448.4	1443.7
15°	1483.0	1484.8	1483.0	1479.2	1476.4	1472.7	1470.8	1471.8	1472.7	1469.0	1464.3
17.5°	1507.2	1508.2	1505.4	1497.0	1493.2	1489.5	1489.5	1491.4	1494.2	1492.3	1487.6
20°	1552.1	1549.3	1542.7	1532.5	1527.8	1521.3	1520.3	1521.3	1521.3	1520.3	1516.6
22.5°	1608.1	1606.2	1597.8	1584.8	1578.2	1574.5	1568.9	1564.2	1563.3	1560.5	1556.7
25°	1675.3	1674.4	1664.1	1652.9	1648.3	1643.6	1638.9	1632.4	1626.8	1620.2	1616.5
27.5°	1761.3	1757.5	1742.6	1737.0	1730.4	1727.6	1721.1	1713.6	1709.0	1700.6	1695.9
30°	1855.6	1855.6	1843.4	1841.6	1841.6	1835.0	1827.6	1814.5	1806.1	1797.7	1794.9
32.5°	1949.9	1950.8	1938.7	1942.4	1945.2	1949.9	1951.8	1947.1	1941.5	1940.6	1935.0
35°	2086.2	2082.5	2070.4	2073.2	2072.2	2071.3	2071.3	2081.6	2083.4	2085.3	2074.1
37.5°	2255.3	2255.3	2243.1	2243.1	2237.5	2231.9	2224.5	2231.0	2241.3	2244.1	2236.6
40°	2448.6	2455.1	2440.2	2439.2	2441.1	2423.4	2415.0	2425.2	2431.8	2443.0	2434.6
42.5°	2676.4	2671.8	2656.8	2655.0	2644.7	2639.1	2631.6	2640.0	2650.3	2657.8	2660.6
45°	2895.0	2891.2	2874.4	2874.4	2864.1	2859.5	2863.2	2877.2	2881.9	2892.2	2902.4
47.5°	3110.7	3106.0	3094.8	3099.5	3100.4	3108.8	3121.0	3134.0	3147.1	3161.1	3165.8
50°	3331.1	3332.0	3319.9	3331.1	3345.1	3368.4	3401.1	3422.6	3449.7	3467.4	3473.0
52.5°	3531.9	3535.6	3548.7	3574.8	3602.8	3648.6	3704.6	3756.9	3801.7	3831.6	3829.8
55°	3772.8	3778.4	3810.1	3855.0	3900.7	3969.8	4052.9	4145.4	4220.1	4263.1	4236.0
57.5°	4081.0	4093.1	4128.6	4189.3	4257.5	4347.1	4461.0	4600.2	4716.0	4773.9	4730.0
60°	4504.0	4511.5	4554.4	4621.7	4703.8	4815.0	4967.2	5154.0	5317.4	5394.0	5343.5
62.5°	5061.5	5075.5	5110.1	5178.2	5262.3	5388.4	5574.2	5807.7	6011.2	6117.7	6003.8
65°	5727.4	5772.2	5801.1	5870.2	5948.7	6082.2	6276.5	6526.7	6745.3	6815.3	6683.6
67.5°	6386.7	6425.9	6476.3	6555.7	6635.1	6785.4	6965.7	7208.5	7448.5	7512.0	7307.4
70°	6675.2	6697.6	6776.1	6884.4	7036.6	7214.1	7422.3	7695.0	7992.0	8044.3	7784.6
72.5°	6097.2	6119.6	6207.4	6391.3	6656.5	6938.6	7301.8	7702.5	8094.7	8153.5	7795.9
75°	4611.4	4575.0	4704.8	4948.5	5306.2	5699.3	6207.4	6781.7	7348.5	7422.3	6995.5
77.5°	2383.2	2378.5	2476.6	2779.2	3205.9	3653.3	4212.6	4861.7	5416.4	5640.5	5293.1
80°	671.4	678.9	725.6	876.0	1125.3	1448.4	1885.5	2493.4	2947.3	3178.9	2984.6
82.5°	263.3	283.9	301.6	329.7	362.3	410.0	547.2	814.3	1092.6	1305.5	1069.3
85°	94.3	100.9	142.9	169.0	171.8	181.2	206.4	240.9	290.4	346.5	284.8
87.5°	35.5	39.2	45.8	75.6	74.7	68.2	83.1	86.8	65.4	59.8	73.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P299896

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1441.9	1441.9	1441.9	1441.9	1441.9	1441.9	1441.9	1441.9
2.5°	1438.1	1439.1	1439.1	1440.0	1440.9	1440.9	1442.8	1442.8
5°	1439.1	1439.1	1437.2	1438.1	1437.2	1437.2	1438.1	1438.1
7.5°	1437.2	1436.3	1434.4	1433.5	1431.6	1431.6	1431.6	1431.6
10°	1434.4	1433.5	1431.6	1430.7	1429.7	1429.7	1429.7	1429.7
12.5°	1441.9	1439.1	1437.2	1436.3	1436.3	1436.3	1436.3	1436.3
15°	1461.5	1455.0	1450.3	1450.3	1451.2	1453.1	1453.1	1455.0
17.5°	1485.8	1478.3	1473.6	1469.9	1471.8	1474.6	1476.4	1478.3
20°	1514.7	1511.0	1504.4	1500.7	1500.7	1504.4	1506.3	1507.2
22.5°	1554.9	1552.1	1549.3	1544.6	1544.6	1546.5	1550.2	1550.2
25°	1614.6	1612.8	1610.9	1607.2	1606.2	1606.2	1608.1	1610.0
27.5°	1689.4	1690.3	1688.4	1687.5	1684.7	1683.7	1686.5	1685.6
30°	1789.3	1793.9	1798.6	1794.9	1790.2	1787.4	1784.6	1780.9
32.5°	1924.7	1919.1	1915.3	1908.8	1900.4	1892.9	1887.3	1880.8
35°	2052.6	2043.3	2039.5	2045.2	2044.2	2039.5	2033.0	2027.4
37.5°	2209.5	2207.6	2209.5	2219.8	2217.9	2222.6	2209.5	2208.6
40°	2407.5	2409.4	2422.4	2434.6	2441.1	2447.6	2440.2	2432.7
42.5°	2637.2	2636.3	2641.0	2657.8	2669.0	2676.4	2660.6	2658.7
45°	2880.0	2873.5	2877.2	2891.2	2902.4	2910.8	2893.1	2893.1
47.5°	3147.1	3135.9	3123.8	3139.6	3146.2	3151.8	3137.8	3133.1
50°	3445.0	3421.7	3395.5	3402.0	3402.0	3400.2	3382.4	3381.5
52.5°	3786.8	3743.8	3696.2	3678.5	3668.2	3657.0	3626.2	3611.2
55°	4180.0	4115.5	4040.8	3995.0	3970.8	3940.0	3888.6	3874.6
57.5°	4639.4	4538.6	4409.7	4353.7	4299.5	4249.1	4192.1	4176.2
60°	5183.9	5035.4	4864.5	4760.8	4702.0	4653.4	4594.6	4591.8
62.5°	5790.9	5556.5	5363.2	5269.8	5226.8	5183.9	5127.8	5135.3
65°	6408.1	6163.5	5982.3	5906.7	5866.5	5831.0	5775.0	5783.4
67.5°	7017.0	6792.0	6593.0	6515.5	6470.7	6425.9	6375.5	6383.9
70°	7454.1	7174.8	6950.7	6778.9	6671.5	6550.1	6471.6	6452.0
72.5°	7328.9	6898.4	6542.6	6201.8	6001.9	5839.4	5729.2	5681.6
75°	6342.8	5754.4	5296.8	4878.5	4643.1	4451.7	4312.6	4225.7
77.5°	4710.4	4049.2	3508.5	3026.6	2645.6	2389.7	2209.5	2092.8
80°	2578.4	1961.1	1433.5	1007.6	740.6	615.4	543.5	509.0
82.5°	803.1	518.3	381.9	329.7	306.3	293.2	271.8	237.2
85°	255.9	224.1	208.3	198.9	189.6	165.3	113.9	103.7
87.5°	99.0	101.8	100.9	95.3	97.1	70.0	56.0	49.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)