

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: P591450

Luminaire Tested: **CTN-CA8-230-740-U-T3-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591450
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-9)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA8-230-740-U-T3-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (8) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18512 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

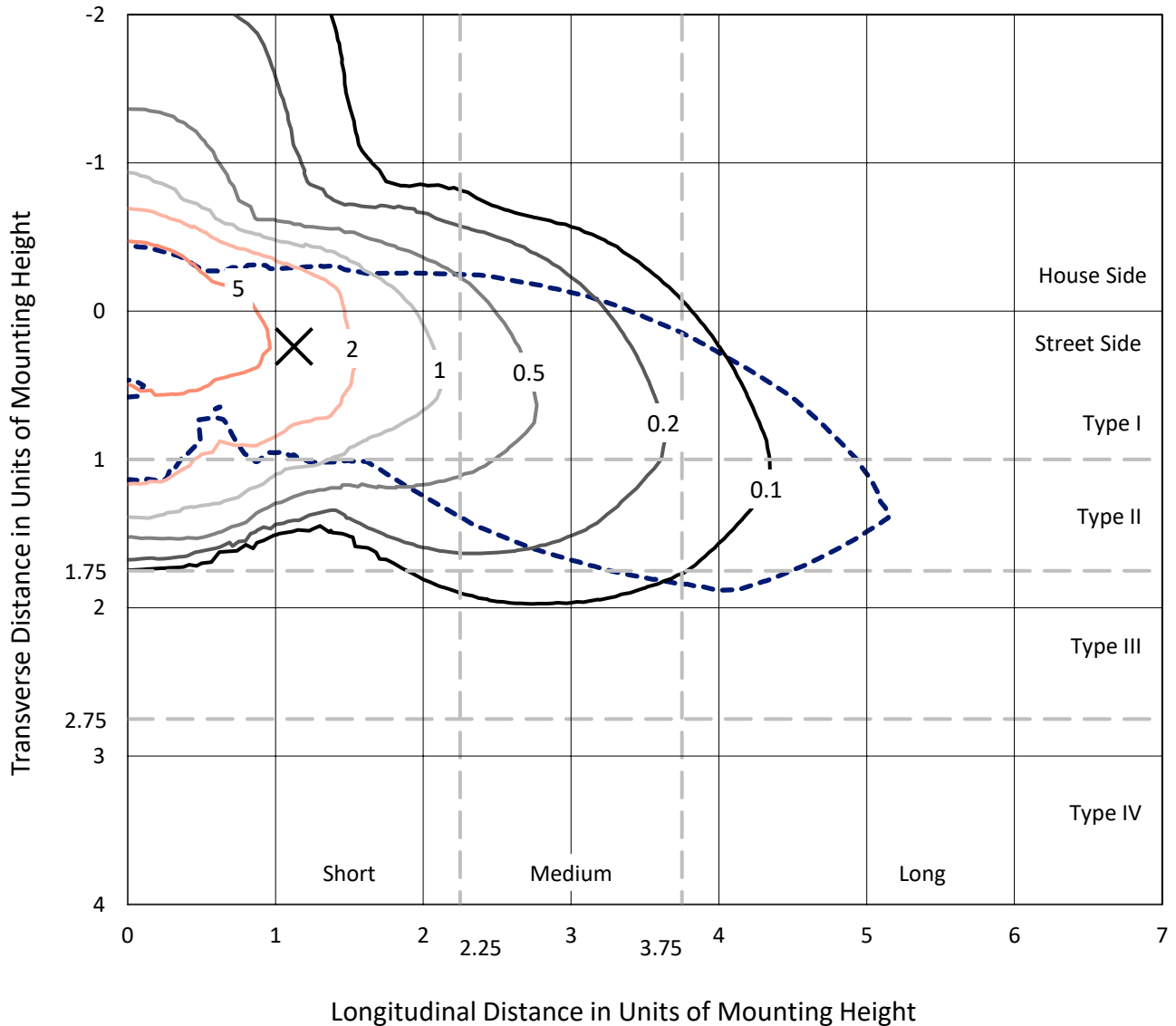
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

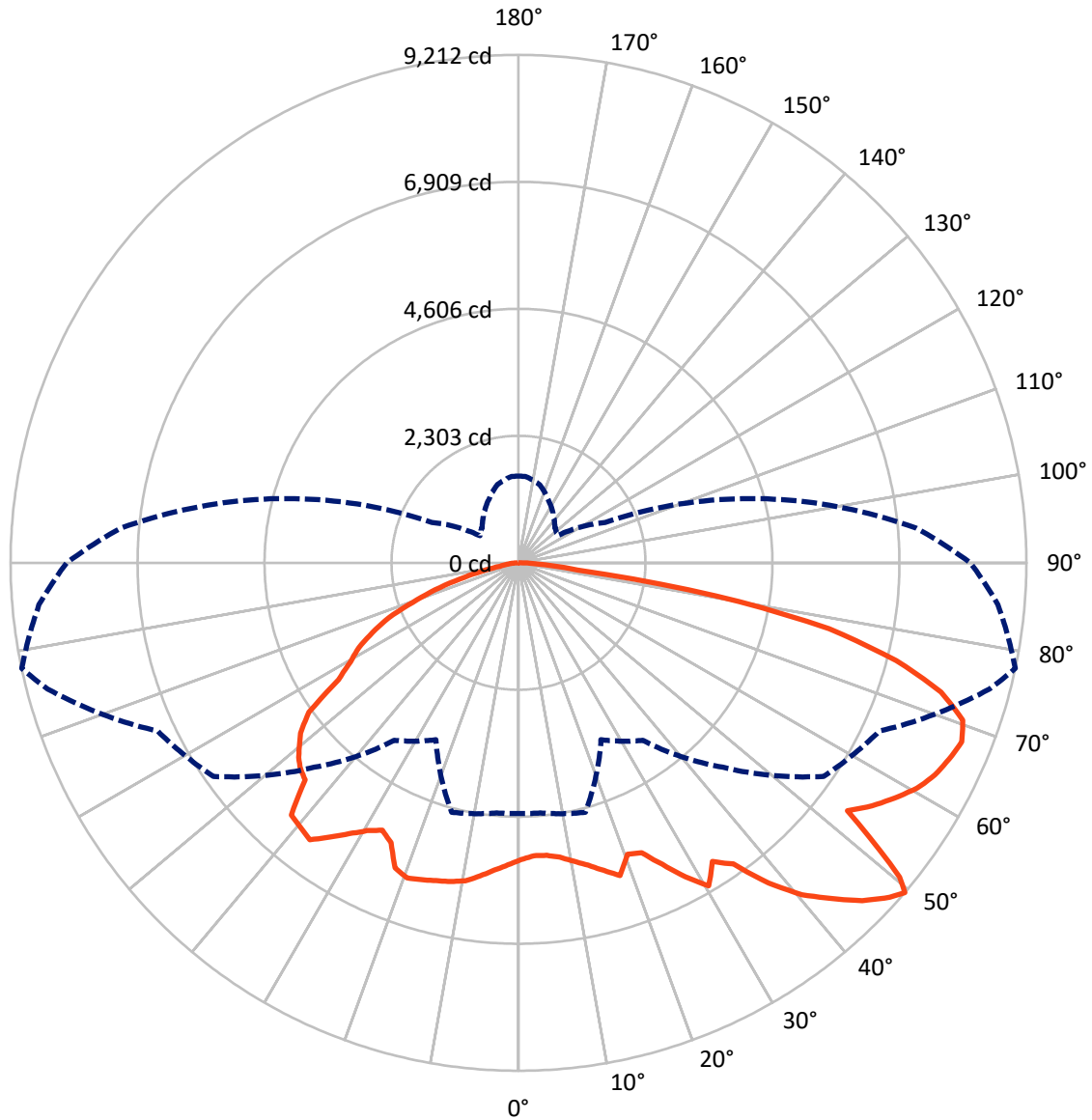
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.7 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 49-Deg Vertical

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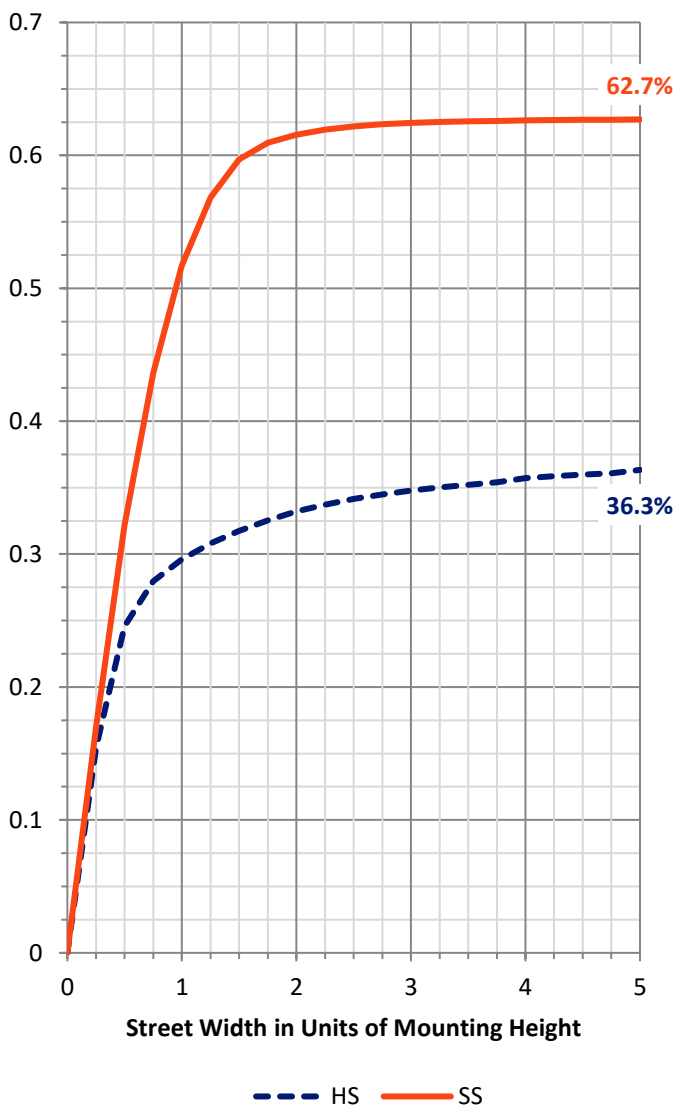
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6923.9	0.0	6923.9
	% Fixture	37.4	0.0	37.4
Street Side	Lumens	11588.1	0.0	11588.1
	% Fixture	62.6	0.0	62.6
Total	Lumens	18512.0	0.0	18512.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	538.8	2.9
10°-20°	1654.0	8.9
20°-30°	2396.9	12.9
30°-40°	2945.2	15.9
40°-50°	3324.2	18.0
50°-60°	3158.8	17.1
60°-70°	2359.2	12.7
70°-80°	1752.1	9.5
80°-90°	382.9	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°	18512.0	100.0
0°-180°	18512.0	100.0

Coefficient of Utilization



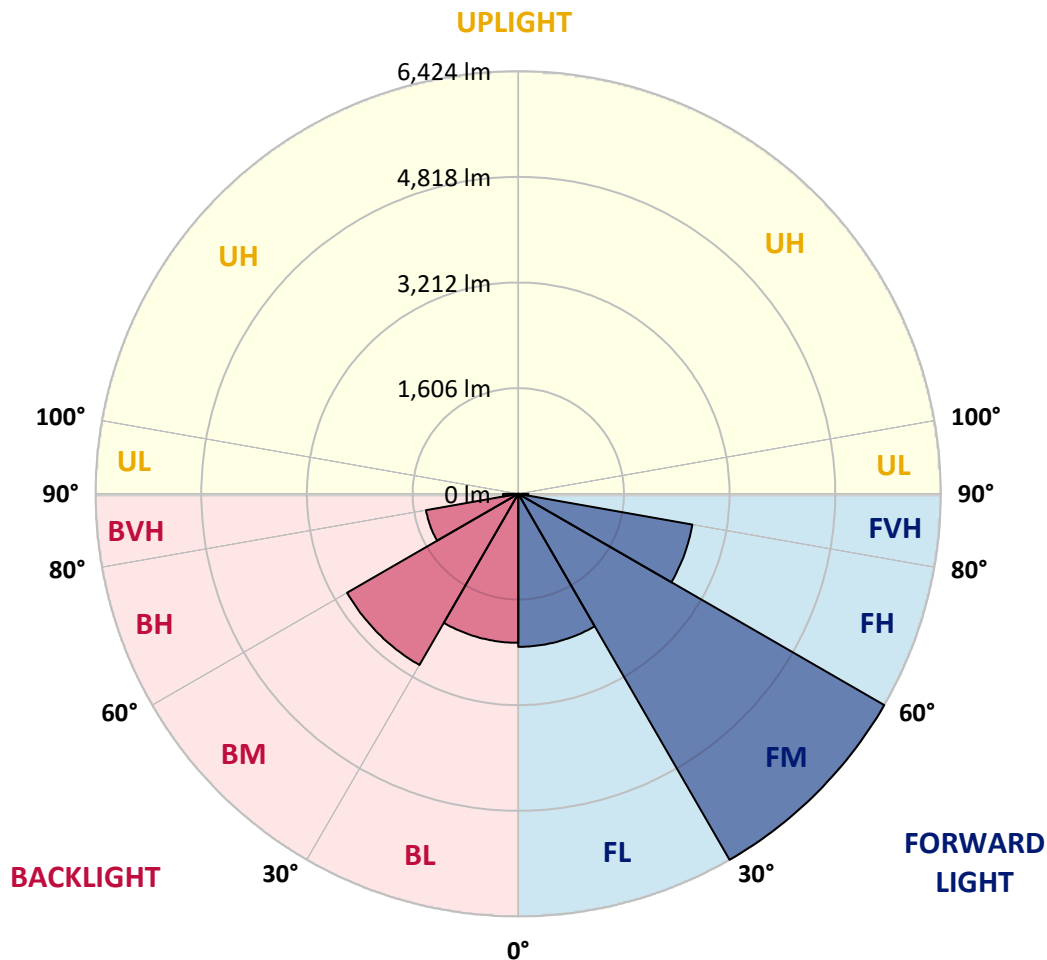
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2325.2	12.6			
FM (30°-60°)	6423.7	34.7			
FH (60°-80°)	2687.8	14.5			G2/5000
FVH (80°-90°)	151.3	0.8			G2/225
BL (0°-30°)	2264.5	12.2	B3/2500		
BM (30°-60°)	3004.5	16.2	B3/5000		
BH (60°-80°)	1423.4	7.7	B3/2500		G3/2500
BVH (80°-90°)	231.5	1.3			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2
2.5°	5266.9	5238.1	5245.8	5290.1	5204.8	5266.9	5241.4	5301.2	5321.2	5318.9	5405.3
5°	5310.1	5272.4	5283.5	5313.4	5220.3	5268.0	5248.0	5312.3	5328.9	5330.0	5447.4
7.5°	5468.5	5425.3	5414.2	5416.4	5328.9	5364.4	5313.4	5363.2	5393.2	5389.8	5520.6
10°	5698.9	5651.3	5626.9	5619.2	5512.8	5497.3	5435.3	5453.0	5497.3	5502.8	5635.8
12.5°	5936.0	5898.4	5862.9	5845.2	5698.9	5664.6	5573.7	5589.3	5622.5	5629.1	5767.6
15°	6145.4	6110.0	6104.4	6084.5	5936.0	5869.6	5759.9	5743.3	5768.7	5789.8	5910.5
17.5°	5940.5	5895.0	5866.2	5872.9	5797.5	5629.1	5561.6	5675.7	5888.4	5962.6	6076.7
20°	5362.1	5417.5	5394.3	5304.5	5223.7	5496.2	5438.6	5414.2	5546.0	5641.3	5917.2
22.5°	4710.7	4710.7	4932.3	5087.4	5118.4	5271.3	5585.9	5695.6	5710.0	5710.0	5630.2
25°	4195.5	4341.8	4717.4	5306.7	5310.1	5279.1	5366.6	5968.2	6067.9	6056.8	5922.7
27.5°	4395.0	4370.6	4623.2	5033.1	5612.5	5577.1	5406.5	5677.9	6499.9	6449.0	6277.3
30°	4571.1	4546.7	4592.2	5100.7	5698.9	5900.6	5754.3	5673.5	6523.2	6800.2	6697.1
32.5°	4736.2	4708.5	4760.6	4838.1	5423.1	6221.9	6118.8	6065.6	6190.8	6460.1	7172.4
35°	4869.1	4873.6	4933.4	5047.5	5315.6	6113.3	6484.4	6504.4	6723.7	6707.1	7067.2
37.5°	4967.7	4976.6	5028.7	5163.8	5263.5	5049.7	6832.3	7062.7	7400.6	7367.4	7102.6
40°	4973.3	4993.2	5097.4	5263.5	5381.0	4496.9	6768.0	7678.7	8013.3	7915.8	7586.8
42.5°	4870.2	4880.2	5054.2	5335.6	4083.6	4677.5	6276.1	8292.5	8442.0	8322.4	7956.8
45°	4778.3	4776.1	4962.2	5214.8	3858.7	4889.1	6262.8	8114.1	8836.5	8743.4	8277.0
47.5°	4648.7	4647.6	4829.3	3924.1	3907.5	5117.3	6593.0	7036.1	9163.3	9063.6	8568.3
49°	4544.5	4555.6	4684.1	3539.7	3929.7	5244.7	6753.6	7220.1	8843.1	9212.0	8730.1
50°	4488.0	4499.1	4185.6	3500.9	3936.3	5317.8	6837.8	7355.2	7959.0	8960.5	8834.2
52.5°	4231.0	4133.5	3245.0	3420.0	3938.5	5404.2	5879.5	7642.2	7585.7	7469.3	8364.5
55°	2549.2	2884.9	2938.1	3328.1	3903.1	3925.2	5743.3	7975.6	7951.3	7781.8	7202.3
57.5°	1545.5	1530.0	2268.9	3072.2	2613.5	3291.5	5968.2	8416.6	8272.5	8046.5	7325.3
60°	545.1	481.9	486.4	524.0	972.7	2462.8	4760.6	6338.2	8339.0	8303.6	7437.2
62.5°	43.2	41.0	41.0	43.2	62.0	925.1	3774.5	6358.1	8569.5	8477.5	7462.7
65°	5.5	5.5	5.5	12.2	32.1	836.4	3780.1	6461.2	8741.2	8583.9	7395.1
67.5°	0.0	0.0	3.3	8.9	25.5	740.1	3669.3	6522.1	8895.2	8672.5	7333.1
70°	0.0	0.0	2.2	7.8	22.2	612.7	3534.1	6575.3	8823.2	8547.3	7020.6
72.5°	0.0	0.0	2.2	6.6	18.8	404.4	3133.1	6182.0	8310.2	8011.1	6379.2
75°	0.0	0.0	2.2	5.5	17.7	230.4	2567.0	5461.9	7395.1	7078.2	5375.4
77.5°	0.0	0.0	1.1	4.4	15.5	126.3	1773.7	4521.3	6108.9	5761.0	4027.1
80°	0.0	0.0	1.1	4.4	14.4	86.4	806.5	2937.0	4071.5	3636.1	2206.9
82.5°	0.0	0.0	1.1	4.4	11.1	58.7	325.7	823.2	1259.7	1076.9	702.4
85°	0.0	0.0	1.1	3.3	7.8	37.7	160.6	337.9	508.5	488.6	355.6
87.5°	0.0	0.0	1.1	3.3	5.5	11.1	47.6	110.8	198.3	201.6	151.8
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2	5383.2
2.5°	5446.3	5456.3	5489.5	5539.4	5547.2	5614.7	5603.7	5730.0	5742.1	5772.1	5805.3
5°	5504.0	5538.3	5613.6	5727.7	5810.8	5912.8	5902.8	6045.7	6060.1	6052.4	6103.3
7.5°	5588.1	5639.1	5756.5	5910.5	5938.2	6064.5	6047.9	6172.0	6174.2	6157.6	6207.5
10°	5711.1	5770.9	5879.5	5967.0	6033.5	6110.0	6098.9	6209.7	6198.6	6179.8	6231.8
12.5°	5829.7	5862.9	5929.4	6032.4	6044.6	6075.6	6056.8	6159.8	6148.7	6122.1	6170.9
15°	5936.0	5952.6	5953.8	6004.7	5977.0	6000.3	5950.4	6024.7	5999.2	5989.2	6023.5
17.5°	6072.3	6041.3	5995.8	5992.5	5898.4	5866.2	5786.5	5806.4	5753.2	5748.8	5767.6
20°	6090.0	6154.3	6023.5	5888.4	5730.0	5649.1	5498.4	5499.5	5439.7	5416.4	5427.5
22.5°	5604.8	5763.2	6055.7	5797.5	5528.3	5346.6	5152.8	5094.0	4981.0	4933.4	4914.6
25°	5794.2	5588.1	5566.0	5644.7	5266.9	4989.9	4708.5	4535.7	4401.6	4293.0	4300.8
27.5°	6087.8	5819.7	5277.9	5310.1	4937.8	4549.0	4124.6	3880.9	3744.6	3639.4	3627.2
30°	6476.7	6139.9	5340.0	4602.1	4560.0	3995.0	3474.3	3205.1	3066.6	3028.9	3005.7
32.5°	6959.7	6521.0	5479.6	4440.4	3773.4	3395.7	2811.8	2594.7	2529.3	2526.0	2499.4
35°	7533.6	7025.1	5608.1	4225.5	3253.8	2765.3	2246.8	2103.9	2113.8	2114.9	2137.1
37.5°	7166.9	7501.5	5768.7	4021.6	2747.5	2055.1	1807.0	1717.2	1746.0	1792.6	1814.7
40°	7172.4	6829.0	5956.0	3681.5	2134.9	1567.7	1413.7	1393.7	1516.7	1610.9	1634.1
42.5°	7460.5	6784.7	5887.3	3293.7	1563.2	1192.1	1177.7	1285.1	1462.4	1567.7	1586.5
45°	7769.6	6995.2	4890.2	2744.2	1133.4	1008.2	1119.0	1268.5	1461.3	1573.2	1584.3
47.5°	8063.2	7128.1	4687.4	2144.9	910.7	950.6	1101.2	1268.5	1469.0	1583.2	1589.8
49°	8193.9	7235.6	4499.1	1734.9	854.2	928.4	1091.3	1270.7	1471.3	1568.8	1572.1
50°	8271.4	7296.5	4347.3	1608.6	826.5	914.0	1086.8	1274.1	1467.9	1552.1	1555.5
52.5°	8392.2	7395.1	3998.3	1281.8	774.4	880.8	1080.2	1287.4	1455.8	1505.6	1503.4
55°	6920.9	6912.1	3707.0	1075.8	734.5	850.9	1078.0	1298.4	1461.3	1512.3	1510.0
57.5°	6632.9	5675.7	3123.1	879.7	701.3	825.4	1080.2	1315.1	1561.0	1649.6	1638.6
60°	6653.9	5589.3	2657.8	763.3	662.5	804.3	1086.8	1389.3	1803.6	1893.4	1865.7
62.5°	6580.8	5377.7	2378.6	685.8	621.5	785.5	1091.3	1492.3	1834.7	1842.4	1794.8
65°	6406.9	5111.8	2003.0	600.5	578.3	767.8	1090.2	1530.0	1692.8	1629.7	1614.2
67.5°	6084.5	4829.3	1585.4	526.2	531.8	741.2	1115.6	1464.6	1602.0	1551.0	1527.8
70°	5702.3	4226.6	1117.9	457.6	489.7	711.3	1112.3	1449.1	1554.4	1479.0	1446.9
72.5°	5022.0	3553.0	752.3	394.4	436.5	676.9	1055.8	1402.6	1523.3	1473.5	1429.2
75°	3991.7	2658.9	436.5	340.1	384.4	627.1	1000.4	1373.8	1540.0	1444.7	1352.7
77.5°	2728.7	1514.5	325.7	284.7	331.3	562.8	907.4	1277.4	1489.0	1407.0	1284.0
80°	1223.1	547.3	249.3	231.5	278.1	456.4	782.2	1130.0	1410.3	1410.3	1323.9
82.5°	486.4	344.6	172.8	181.7	227.1	347.9	619.3	974.9	1243.0	1299.5	1389.3
85°	274.8	201.6	110.8	131.8	173.9	269.2	450.9	757.8	1012.6	1122.3	1216.5
87.5°	108.6	76.4	44.3	74.2	100.8	138.5	197.2	371.1	545.1	671.4	742.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)