

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: P591351

Luminaire Tested: **CTN-CA8-230-730-U-T2-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591351
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-6)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA8-230-730-U-T2-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (8) 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19317 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

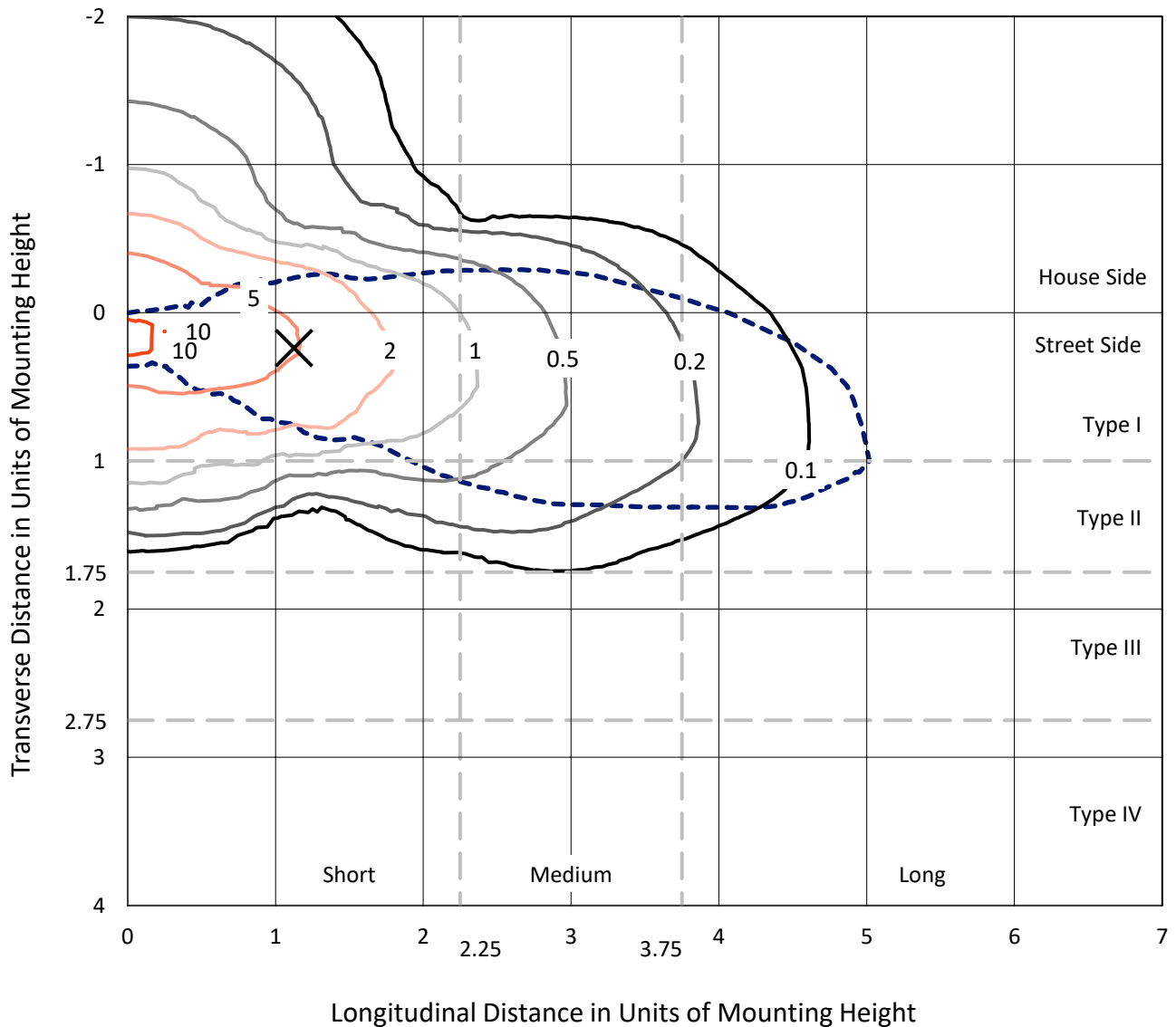
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

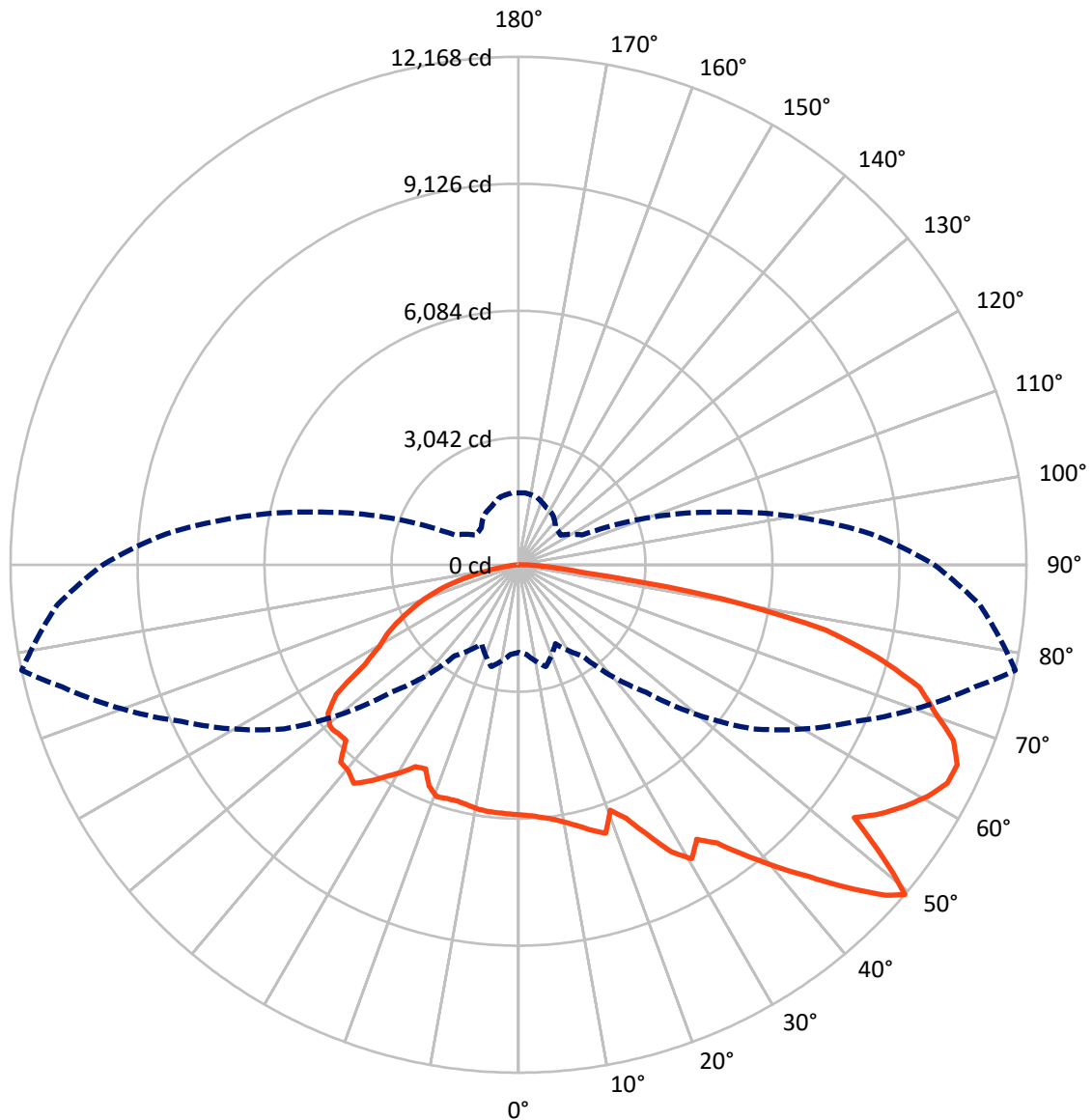
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11 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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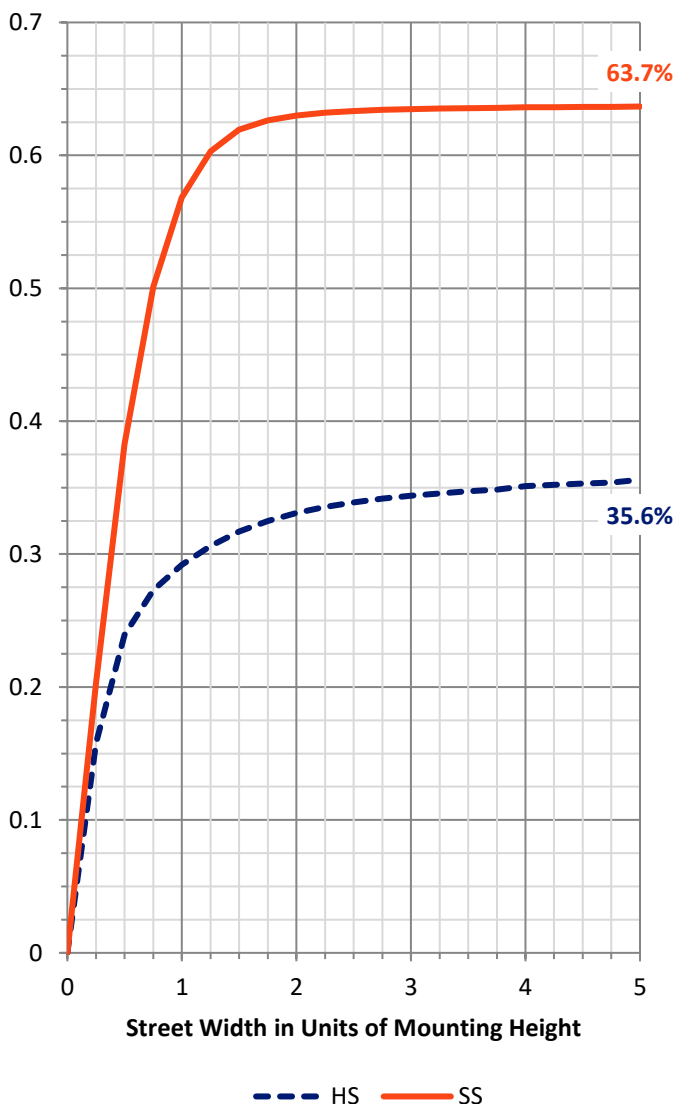
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7056.8	0.0	7056.8
	% Fixture	36.5	0.0	36.5
Street Side	Lumens	12260.2	0.0	12260.2
	% Fixture	63.5	0.0	63.5
Total	Lumens	19317.0	0.0	19317.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	580.6	3.0
10°-20°	1707.4	8.8
20°-30°	2404.0	12.4
30°-40°	3013.5	15.6
40°-50°	3401.4	17.6
50°-60°	3268.3	16.9
60°-70°	2670.0	13.8
70°-80°	1873.1	9.7
80°-90°	398.7	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°	19317.0	100.0
0°-180°	19317.0	100.0

Coefficient of Utilization



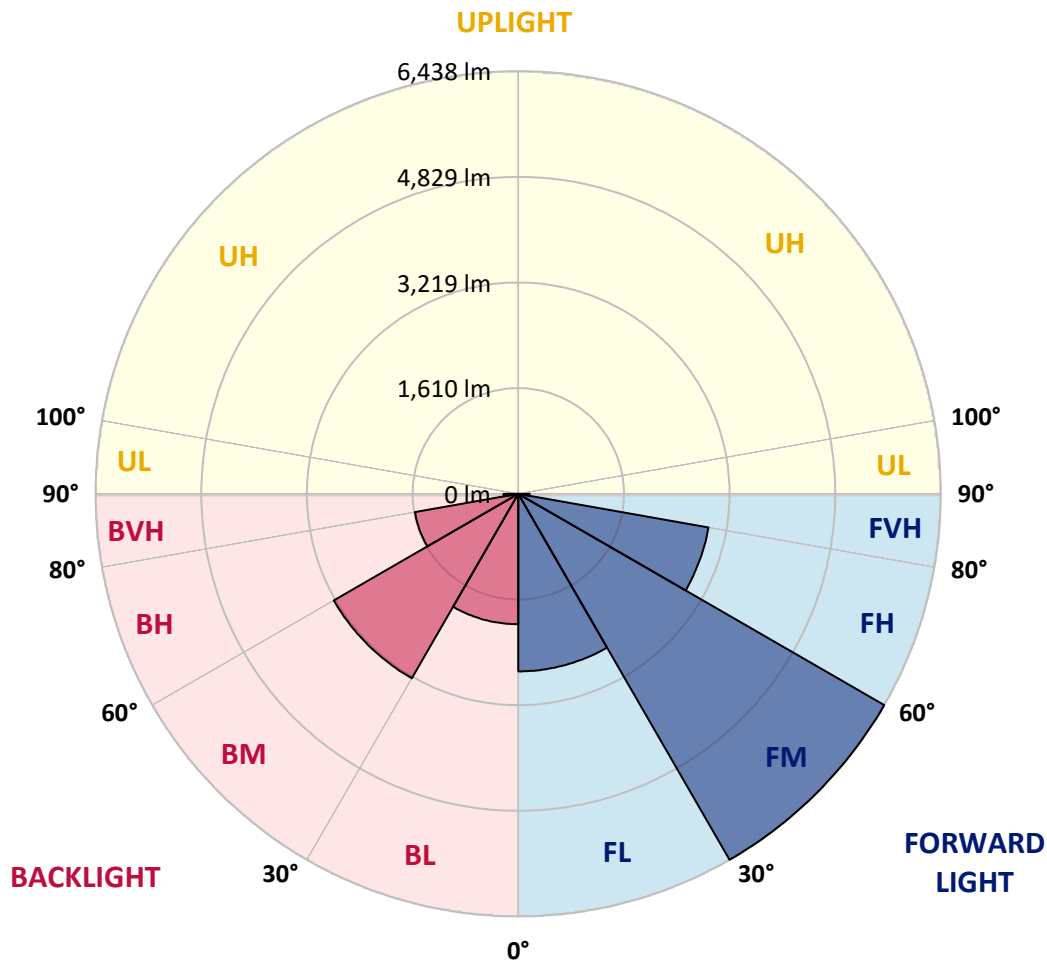
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2704.9	14.0			
FM (30°-60°)	6438.1	33.3			
FH (60°-80°)	2943.5	15.2			G2/5000
FVH (80°-90°)	173.6	0.9			G2/225
BL (0°-30°)	1987.1	10.3	B3/2500		
BM (30°-60°)	3245.1	16.8	B3/5000		
BH (60°-80°)	1599.5	8.3	B3/2500		G3/2500
BVH (80°-90°)	225.1	1.2			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°	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7
2.5°	6238.6	6181.0	6194.0	6224.5	6107.0	6139.6	6087.4	6110.2	6048.2	6022.1	6033.0
5°	6683.5	6616.1	6631.3	6646.5	6473.6	6399.6	6253.8	6220.1	6125.5	6082.0	6076.5
7.5°	6895.7	6826.0	6842.3	6842.3	6710.7	6722.7	6574.7	6418.1	6228.8	6160.3	6129.8
10°	7236.1	7157.8	7145.8	7125.2	6953.3	6877.2	6754.2	6662.9	6375.7	6277.8	6194.0
12.5°	7485.2	7424.3	7425.4	7402.6	7208.9	7153.5	6937.0	6829.3	6545.4	6426.8	6291.9
15°	7588.6	7545.1	7573.4	7504.8	7375.4	7292.7	7190.4	7017.5	6723.8	6601.9	6435.5
17.5°	7106.7	7028.4	6820.6	6856.5	6847.8	6872.8	6772.7	6875.0	6828.2	6761.8	6652.0
20°	6017.8	6100.5	6246.2	6116.8	6107.0	6432.2	6665.0	6633.5	6372.4	6275.6	6385.5
22.5°	5113.8	5012.6	5320.5	5780.6	5910.1	6241.9	6637.8	7014.2	6719.4	6595.4	6262.5
25°	4302.3	4404.6	4883.2	5579.4	5986.2	6084.1	6537.8	7245.9	7292.7	7157.8	6726.0
27.5°	4173.9	4172.9	4495.9	5170.4	6096.1	6402.9	6542.1	7130.6	7872.5	7780.0	7284.0
30°	4144.6	4129.3	4252.3	4935.4	5797.0	6689.0	6959.8	7166.5	7868.2	8177.1	7921.5
32.5°	4018.4	4006.4	4132.6	4453.5	5390.1	6962.0	7360.1	7632.1	7672.3	7841.0	8568.7
35°	3816.1	3844.3	4009.7	4364.3	5056.2	6424.6	7765.9	8191.2	8288.1	8189.1	8194.5
37.5°	3622.4	3644.2	3813.9	4205.5	4812.5	5225.9	8044.4	8728.6	8944.0	8830.9	8302.2
40°	3371.1	3401.6	3602.8	4036.9	4652.6	4510.1	7640.8	9359.5	9658.7	9514.0	8914.6
42.5°	3088.3	3102.4	3340.7	3759.5	3336.3	4534.0	7069.7	9938.3	10357.1	10213.5	9490.1
45°	2846.8	2855.5	3050.2	3316.7	3007.8	4495.9	6674.8	9664.1	11172.9	11029.3	10099.3
47.5°	2507.4	2569.4	2780.5	2293.1	2793.5	4402.4	6807.5	8569.8	11937.7	11831.1	10691.0
49°	2100.6	2156.0	2527.0	2088.6	2660.8	4318.6	6853.2	8889.6	11317.6	12168.3	11096.8
50°	1930.9	1971.1	1936.3	2015.7	2564.0	4233.8	6780.3	9147.4	10401.7	11653.7	11357.9
52.5°	1678.5	1562.1	1330.4	1810.1	2341.0	3903.1	5587.0	9840.4	10305.9	10071.0	10642.1
55°	709.3	1010.6	1177.0	1484.9	2115.8	2369.3	5173.6	10595.3	10768.3	10531.1	9563.0
57.5°	554.8	565.7	647.2	1105.2	1170.5	1835.1	5005.0	10919.5	11117.5	10911.9	9933.9
60°	81.6	80.5	106.6	127.3	290.4	844.1	3271.1	7772.4	10730.2	11266.5	10273.3
62.5°	29.4	30.5	30.5	35.9	53.3	369.9	2378.0	7251.4	10989.1	11526.5	10557.2
65°	2.2	3.3	5.4	12.0	28.3	349.2	2109.3	7379.7	10905.3	11551.5	10695.4
67.5°	0.0	1.1	3.3	8.7	22.8	343.7	1961.3	7163.3	10554.0	11233.9	10393.0
70°	0.0	0.0	2.2	7.6	20.7	330.7	1703.5	6429.0	9925.2	10582.3	9842.5
72.5°	0.0	0.0	2.2	7.6	18.5	315.5	1400.0	5659.9	9353.0	10040.5	9044.1
75°	0.0	0.0	2.2	6.5	16.3	287.2	1023.6	4102.1	8378.3	8903.8	7910.6
77.5°	0.0	0.0	2.2	6.5	15.2	248.0	691.8	2350.8	6893.5	7528.8	6646.5
80°	0.0	0.0	2.2	5.4	14.1	188.2	391.6	1173.8	3602.8	4948.5	4750.5
82.5°	0.0	0.0	2.2	5.4	10.9	100.1	182.8	512.4	1328.2	1567.5	1829.7
85°	0.0	0.0	2.2	4.4	8.7	25.0	62.0	243.7	725.6	806.1	786.5
87.5°	0.0	0.0	2.2	4.4	6.5	9.8	20.7	69.6	268.7	300.2	256.7
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°	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7	5991.7
2.5°	6030.8	5997.1	5965.6	5969.9	5894.9	5878.5	5807.8	5851.3	5822.0	5785.0	5808.9
5°	6043.9	6000.4	5944.9	5882.9	5718.6	5659.9	5562.0	5590.3	5551.1	5507.6	5530.4
7.5°	6072.2	6021.0	5929.7	5768.7	5577.2	5473.9	5360.7	5457.6	5445.6	5420.6	5445.6
10°	6084.1	6039.5	5884.0	5696.9	5431.5	5360.7	5274.8	5258.5	5261.8	5267.2	5304.2
12.5°	6115.7	6049.3	5810.0	5588.1	5346.6	5206.3	5121.4	5171.5	5068.1	5022.4	5042.0
15°	6192.9	6066.7	5752.4	5436.9	5196.5	5085.5	4876.7	4876.7	4850.6	4806.0	4819.0
17.5°	6348.5	6136.4	5737.1	5336.8	5029.0	4837.5	4646.1	4544.9	4516.6	4530.7	4539.4
20°	6432.2	6264.7	5729.5	5205.2	4840.8	4618.9	4328.4	4256.6	4162.0	4175.0	4190.3
22.5°	5928.6	5709.9	5717.5	5044.2	4608.0	4326.2	4008.6	3883.5	3825.8	3815.0	3844.3
25°	6287.6	5847.0	5167.1	4956.1	4352.3	3993.4	3671.4	3499.5	3411.4	3405.9	3424.4
27.5°	6764.0	6224.5	5091.0	4542.7	4080.4	3589.8	3234.1	3111.1	3024.1	3019.8	3023.0
30°	7318.8	6728.1	5280.2	4033.6	3711.6	3124.2	2841.4	2754.3	2674.9	2640.1	2641.2
32.5°	7935.6	7183.9	5463.0	3935.7	2975.2	2718.4	2498.7	2431.3	2322.5	2272.4	2258.3
35°	8513.2	7668.0	5691.4	3771.4	2581.4	2357.3	2202.8	2112.5	2027.7	1985.3	1971.1
37.5°	8004.1	8114.0	5893.8	3636.6	2281.1	1953.7	1911.3	1851.5	1807.9	1775.3	1769.9
40°	8120.5	7309.0	6013.4	3382.0	1971.1	1706.8	1638.2	1667.6	1712.2	1685.0	1683.9
42.5°	8508.9	7434.1	5904.7	3029.6	1725.3	1471.8	1491.4	1601.3	1694.8	1677.4	1679.6
45°	9064.8	7824.6	5067.0	2608.6	1487.0	1326.0	1453.3	1581.7	1699.2	1704.6	1704.6
47.5°	9640.2	8264.1	4911.5	2047.3	1311.9	1269.5	1446.8	1557.7	1692.6	1727.4	1723.1
49°	9958.9	8477.3	4868.0	1685.0	1233.6	1257.5	1445.7	1534.9	1679.6	1728.5	1723.1
50°	10144.9	8623.1	4786.4	1540.3	1187.9	1255.3	1446.8	1520.8	1666.5	1720.9	1718.7
52.5°	10535.5	8808.0	4501.4	1268.4	1076.9	1247.7	1464.2	1507.7	1626.3	1683.9	1705.7
55°	8705.8	8495.8	4022.7	1138.9	1026.9	1232.5	1464.2	1515.3	1591.5	1625.2	1645.9
57.5°	8813.5	7264.4	3163.4	1074.8	993.2	1216.2	1441.4	1514.2	1573.0	1578.4	1571.9
60°	9142.0	7433.0	2358.4	1009.5	954.0	1195.5	1392.4	1479.4	1524.0	1524.0	1504.4
62.5°	9338.9	7512.4	1886.3	937.7	912.7	1153.1	1319.5	1412.0	1445.7	1427.2	1423.9
65°	9387.8	7576.6	1368.5	860.5	865.9	1107.4	1244.5	1325.0	1371.7	1340.2	1346.7
67.5°	9219.2	7118.7	999.7	781.1	812.6	1045.4	1170.5	1242.3	1276.0	1259.7	1263.0
70°	8595.9	6620.4	703.8	645.1	726.7	949.7	1076.9	1159.6	1177.0	1148.7	1153.1
72.5°	7594.0	5851.3	443.8	504.7	639.6	861.5	967.1	1019.3	1022.5	1057.4	1075.8
75°	6613.9	4695.0	320.9	398.1	508.0	736.4	883.3	932.3	968.2	1142.2	1170.5
77.5°	5300.9	2970.8	273.0	314.4	399.2	611.4	787.6	862.6	1185.7	1271.7	1249.9
80°	3212.3	1844.9	205.6	248.0	332.9	469.9	674.4	888.7	1199.9	1119.4	1073.7
82.5°	1482.7	801.7	139.2	202.3	264.3	350.3	531.9	1037.8	1028.0	857.2	848.5
85°	533.0	237.1	76.1	144.7	184.9	241.5	409.0	1028.0	806.1	720.1	674.4
87.5°	136.0	42.4	31.5	70.7	93.6	128.4	223.0	543.9	418.8	368.8	355.7
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)