

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: P591111

Luminaire Tested: **CTN-CA10-310-722-U-T2-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591111
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-CA10-310-722-U-T2-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (10) 2200K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21672 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

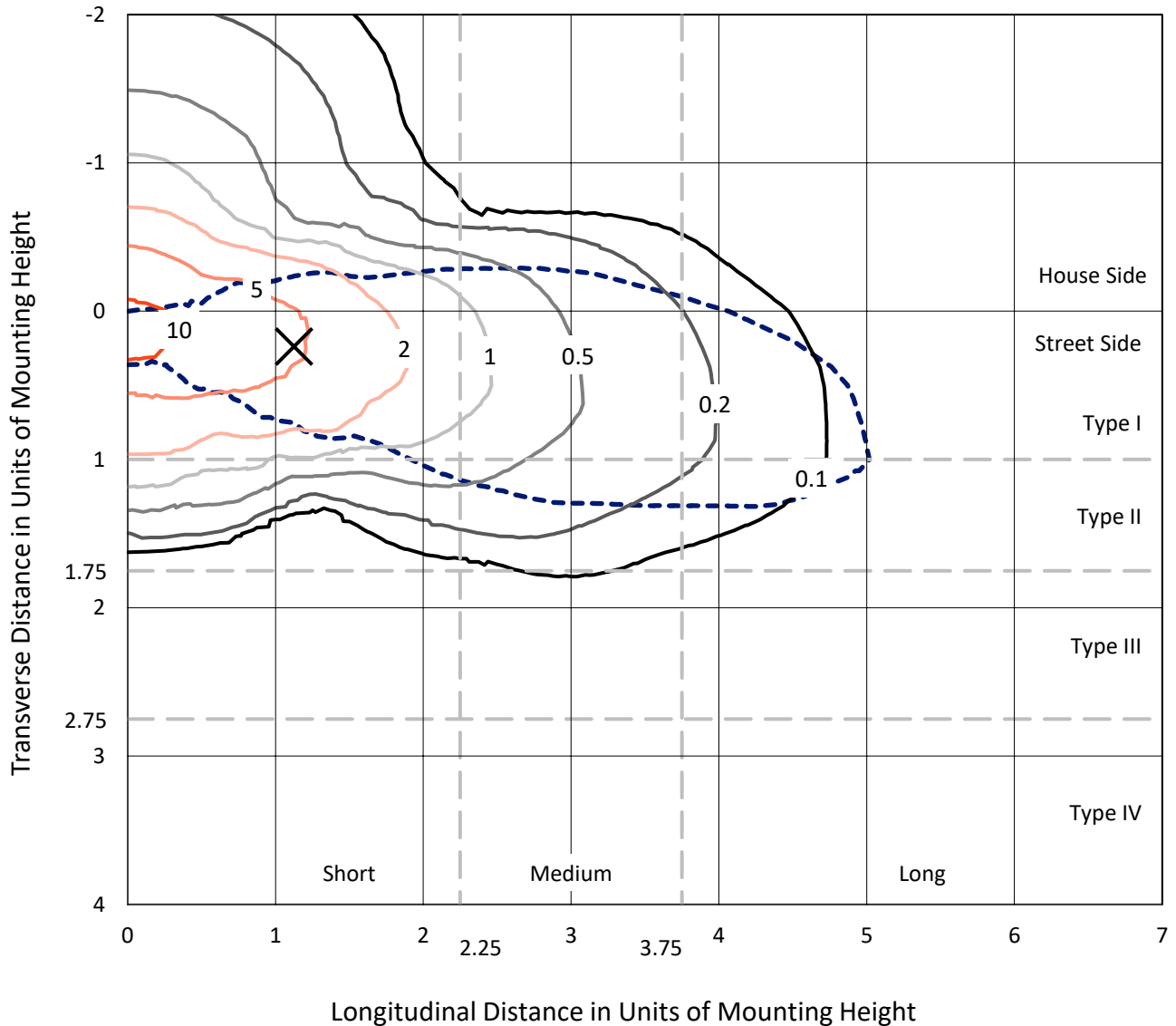
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

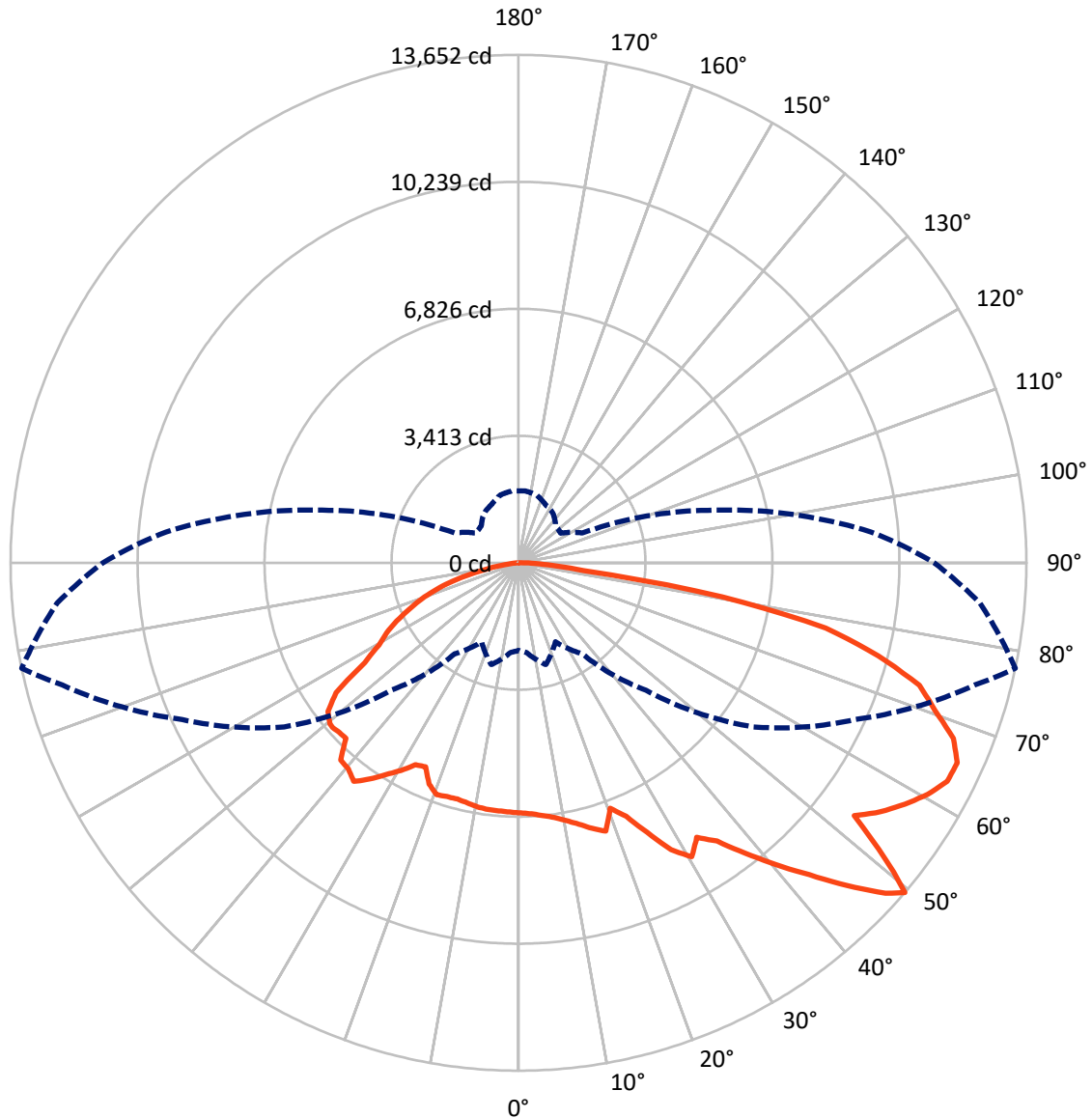
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.4 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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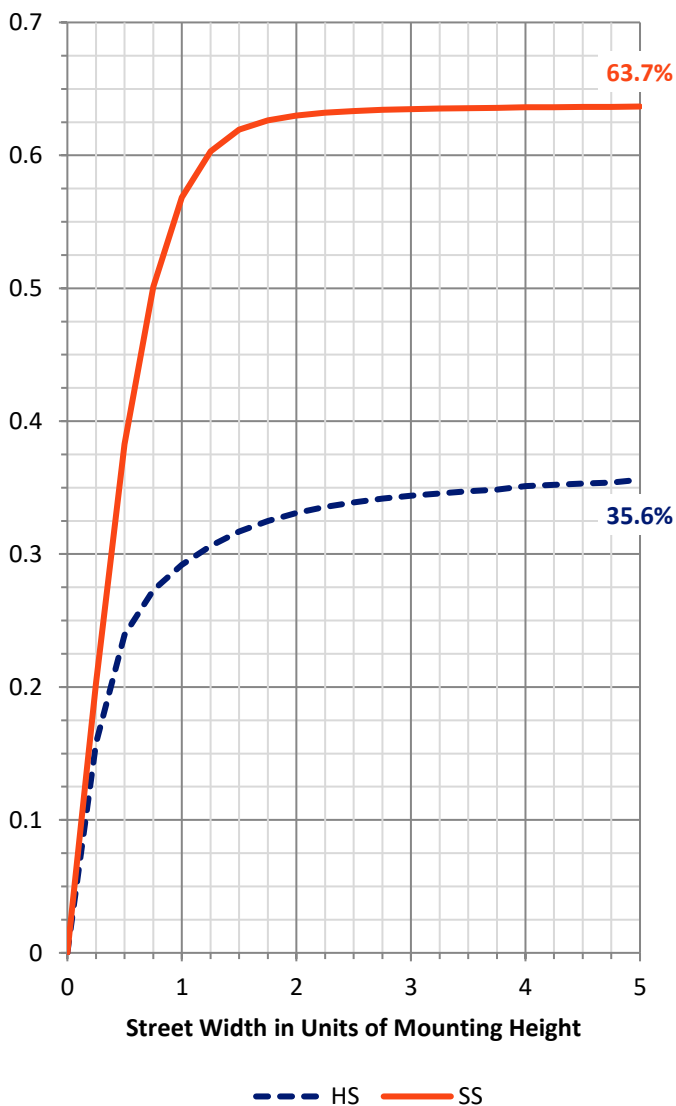
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7917.1	0.0	7917.1
	% Fixture	36.5	0.0	36.5
Street Side	Lumens	13754.9	0.0	13754.9
	% Fixture	63.5	0.0	63.5
Total	Lumens	21672.0	0.0	21672.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	651.3	3.0
10°-20°	1915.6	8.8
20°-30°	2697.1	12.4
30°-40°	3380.9	15.6
40°-50°	3816.1	17.6
50°-60°	3666.7	16.9
60°-70°	2995.5	13.8
70°-80°	2101.4	9.7
80°-90°	447.4	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°	21672.0	100.0
0°-180°	21672.0	100.0

Coefficient of Utilization



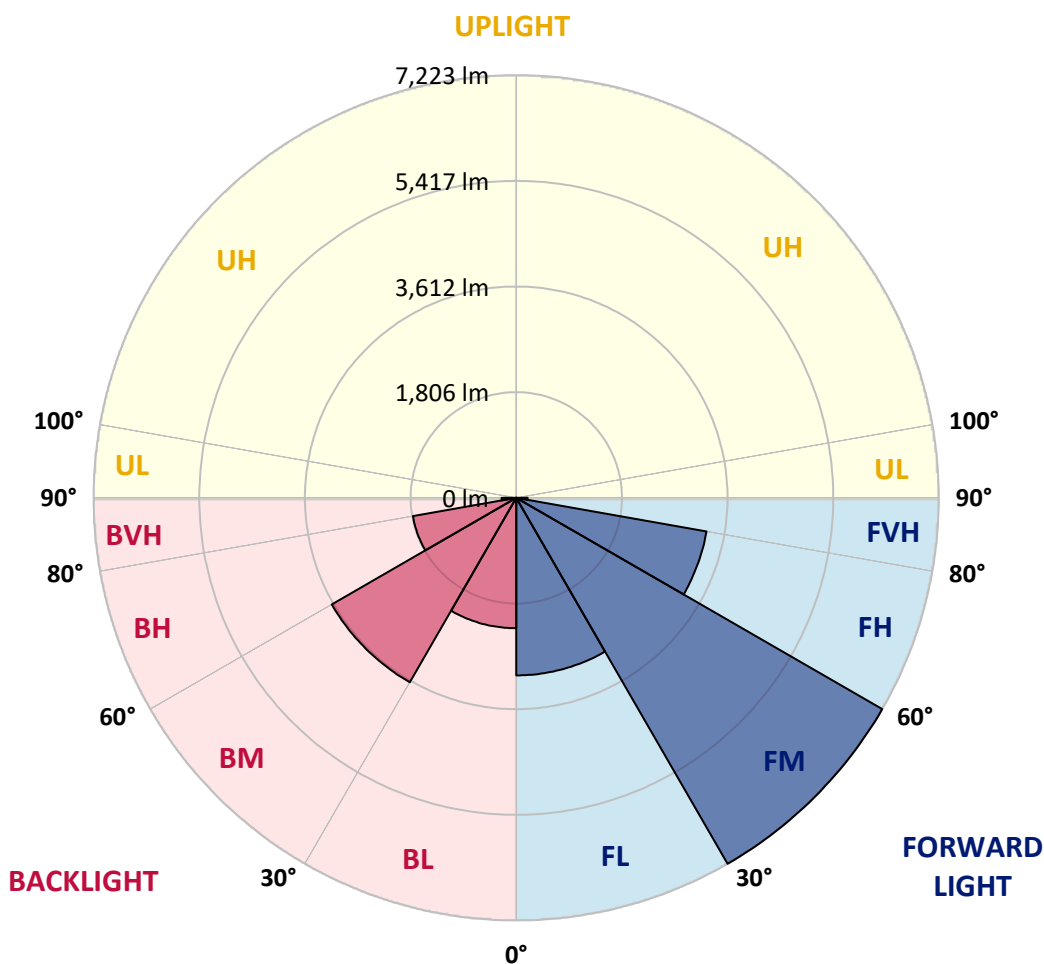
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3034.7	14.0			
FM (30°-60°)	7223.0	33.3			
FH (60°-80°)	3302.4	15.2			G2/5000
FVH (80°-90°)	194.8	0.9			G2/225
BL (0°-30°)	2229.3	10.3	B3/2500		
BM (30°-60°)	3640.7	16.8	B3/5000		
BH (60°-80°)	1794.5	8.3	B3/2500		G3/2500
BVH (80°-90°)	252.6	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°	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1
2.5°	6999.2	6934.5	6949.1	6983.3	6851.5	6888.1	6829.5	6855.2	6785.6	6756.3	6768.5
5°	7498.3	7422.7	7439.8	7456.8	7262.8	7179.8	7016.3	6978.4	6872.3	6823.4	6817.3
7.5°	7736.3	7658.2	7676.5	7676.5	7528.8	7542.3	7376.3	7200.6	6988.2	6911.3	6877.1
10°	8118.3	8030.4	8017.0	7993.8	7801.0	7715.6	7577.7	7475.1	7153.0	7043.1	6949.1
12.5°	8397.8	8329.5	8330.7	8305.0	8087.8	8025.6	7782.7	7661.9	7343.3	7210.3	7059.0
15°	8513.7	8464.9	8496.7	8419.8	8274.5	8181.8	8067.1	7873.0	7543.5	7406.8	7220.1
17.5°	7973.1	7885.2	7652.1	7692.4	7682.6	7710.7	7598.4	7713.1	7660.7	7586.2	7462.9
20°	6751.4	6844.2	7007.7	6862.5	6851.5	7216.4	7477.6	7442.2	7149.3	7040.7	7163.9
22.5°	5737.3	5623.8	5969.1	6485.4	6630.6	7002.8	7447.1	7869.3	7538.6	7399.5	7026.0
25°	4826.8	4941.5	5478.5	6259.6	6716.0	6825.9	7334.8	8129.3	8181.8	8030.4	7545.9
27.5°	4682.8	4681.6	5044.0	5800.7	6839.3	7183.5	7339.7	7999.9	8832.3	8728.5	8172.0
30°	4649.8	4632.8	4770.7	5537.1	6503.7	7504.4	7808.3	8040.2	8827.4	9174.0	8887.2
32.5°	4508.3	4494.9	4636.4	4996.5	6047.2	7810.8	8257.4	8562.6	8607.7	8796.9	9613.3
35°	4281.3	4313.0	4498.5	4896.4	5672.6	7207.9	8712.7	9189.9	9298.5	9187.4	9193.5
37.5°	4064.0	4088.4	4278.8	4718.2	5399.2	5863.0	9025.1	9792.8	10034.4	9907.5	9314.3
40°	3782.1	3816.3	4042.1	4529.0	5219.8	5059.9	8572.3	10500.6	10836.2	10673.9	10001.4
42.5°	3464.8	3480.7	3747.9	4217.8	3743.1	5086.8	7931.6	11149.9	11619.7	11458.6	10647.1
45°	3193.9	3203.6	3422.1	3721.1	3374.5	5044.0	7488.6	10842.3	12535.1	12374.0	11330.5
47.5°	2813.1	2882.7	3119.4	2572.7	3134.1	4939.1	7637.5	9614.6	13393.0	13273.4	11994.4
49°	2356.7	2418.9	2835.1	2343.2	2985.2	4845.1	7688.7	9973.4	12697.4	13651.8	12449.6
50°	2166.3	2211.4	2172.4	2261.5	2876.6	4749.9	7607.0	10262.6	11669.8	13074.5	12742.5
52.5°	1883.1	1752.5	1492.6	2030.8	2626.4	4378.9	6268.1	11040.0	11562.4	11298.8	11939.5
55°	795.7	1133.8	1320.5	1665.9	2373.7	2658.1	5804.4	11887.0	12081.1	11815.0	10728.8
57.5°	622.4	634.6	726.2	1240.0	1313.2	2058.9	5615.2	12250.7	12472.8	12242.2	11145.0
60°	91.5	90.3	119.6	142.8	325.9	947.1	3669.8	8720.0	12038.3	12640.0	11525.8
62.5°	33.0	34.2	34.2	40.3	59.8	414.9	2667.9	8135.4	12328.8	12931.7	11844.3
65°	2.4	3.7	6.1	13.4	31.7	391.8	2366.4	8279.4	12234.8	12959.8	11999.3
67.5°	0.0	1.2	3.7	9.8	25.6	385.7	2200.4	8036.5	11840.6	12603.4	11660.0
70°	0.0	0.0	2.4	8.5	23.2	371.0	1911.2	7212.8	11135.2	11872.4	11042.5
72.5°	0.0	0.0	2.4	8.5	20.7	353.9	1570.7	6349.9	10493.3	11264.6	10146.7
75°	0.0	0.0	2.4	7.3	18.3	322.2	1148.4	4602.3	9399.8	9989.2	8875.0
77.5°	0.0	0.0	2.4	7.3	17.1	278.3	776.2	2637.4	7733.9	8446.6	7456.8
80°	0.0	0.0	2.4	6.1	15.9	211.1	439.4	1316.8	4042.1	5551.7	5329.6
82.5°	0.0	0.0	2.4	6.1	12.2	112.3	205.0	574.8	1490.1	1758.6	2052.8
85°	0.0	0.0	2.4	4.9	9.8	28.1	69.6	273.4	814.0	904.3	882.4
87.5°	0.0	0.0	2.4	4.9	7.3	11.0	23.2	78.1	301.4	336.8	288.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1	6722.1
2.5°	6766.1	6728.2	6692.9	6697.7	6613.5	6595.2	6515.9	6564.7	6531.8	6490.3	6517.1
5°	6780.7	6731.9	6669.7	6600.1	6415.8	6349.9	6240.1	6271.8	6227.9	6179.1	6204.7
7.5°	6812.5	6755.1	6652.6	6472.0	6257.2	6141.2	6014.3	6122.9	6109.5	6081.4	6109.5
10°	6825.9	6775.8	6601.3	6391.4	6093.6	6014.3	5917.9	5899.6	5903.2	5909.3	5950.8
12.5°	6861.3	6786.8	6518.3	6269.4	5998.4	5841.0	5745.8	5801.9	5686.0	5634.7	5656.7
15°	6947.9	6806.4	6453.6	6099.7	5830.0	5705.5	5471.2	5471.2	5441.9	5391.9	5406.5
17.5°	7122.4	6884.5	6436.6	5987.4	5642.1	5427.3	5212.5	5099.0	5067.2	5083.1	5092.9
20°	7216.4	7028.5	6428.0	5839.8	5430.9	5182.0	4856.1	4775.6	4669.4	4684.0	4701.1
22.5°	6651.4	6406.1	6414.6	5659.1	5169.8	4853.7	4497.3	4356.9	4292.3	4280.1	4313.0
25°	7054.1	6559.8	5797.1	5560.3	4883.0	4480.2	4119.0	3926.1	3827.3	3821.2	3841.9
27.5°	7588.6	6983.3	5711.6	5096.5	4577.8	4027.4	3628.3	3490.4	3392.8	3387.9	3391.6
30°	8211.1	7548.4	5924.0	4525.4	4164.1	3505.1	3187.8	3090.1	3001.0	2962.0	2963.2
32.5°	8903.1	8059.7	6129.0	4415.5	3337.9	3049.9	2803.3	2727.7	2605.6	2549.5	2533.6
35°	9551.1	8602.8	6385.3	4231.2	2896.1	2644.7	2471.4	2370.1	2274.9	2227.3	2211.4
37.5°	8979.9	9103.2	6612.3	4079.9	2559.2	2191.9	2144.3	2077.2	2028.4	1991.7	1985.6
40°	9110.5	8200.1	6746.6	3794.3	2211.4	1914.9	1838.0	1870.9	1921.0	1890.5	1889.2
42.5°	9546.2	8340.4	6624.5	3398.9	1935.6	1651.2	1673.2	1796.5	1901.4	1881.9	1884.3
45°	10169.9	8778.6	5684.8	2926.6	1668.3	1487.7	1630.5	1774.5	1906.3	1912.4	1912.4
47.5°	10815.5	9271.6	5510.3	2296.9	1471.8	1424.2	1623.2	1747.7	1899.0	1938.0	1933.2
49°	11173.1	9510.8	5461.4	1890.5	1384.0	1410.8	1622.0	1722.0	1884.3	1939.3	1933.2
50°	11381.8	9674.4	5369.9	1728.1	1332.7	1408.4	1623.2	1706.2	1869.7	1930.7	1928.3
52.5°	11819.9	9881.8	5050.2	1423.0	1208.2	1399.8	1642.7	1691.5	1824.5	1889.2	1913.6
55°	9767.1	9531.6	4513.2	1277.8	1152.1	1382.8	1642.7	1700.1	1785.5	1823.3	1846.5
57.5°	9887.9	8150.0	3549.0	1205.8	1114.3	1364.4	1617.1	1698.8	1764.7	1770.8	1763.5
60°	10256.5	8339.2	2645.9	1132.6	1070.3	1341.3	1562.2	1659.8	1709.8	1709.8	1687.9
62.5°	10477.4	8428.3	2116.2	1052.0	1023.9	1293.7	1480.4	1584.1	1622.0	1601.2	1597.5
65°	10532.3	8500.3	1535.3	965.4	971.5	1242.4	1396.2	1486.5	1539.0	1503.6	1510.9
67.5°	10343.2	7986.5	1121.6	876.3	911.7	1172.8	1313.2	1393.7	1431.6	1413.3	1416.9
70°	9643.9	7427.6	789.6	723.7	815.2	1065.4	1208.2	1301.0	1320.5	1288.8	1293.7
72.5°	8519.8	6564.7	497.9	566.3	717.6	966.6	1085.0	1143.5	1147.2	1186.3	1207.0
75°	7420.2	5267.4	360.0	446.7	569.9	826.2	991.0	1045.9	1086.2	1281.5	1313.2
77.5°	5947.2	3333.0	306.3	352.7	447.9	685.9	883.6	967.8	1330.3	1426.7	1402.3
80°	3603.9	2069.9	230.7	278.3	373.5	527.2	756.7	997.1	1346.1	1255.8	1204.6
82.5°	1663.4	899.5	156.2	227.0	296.6	393.0	596.8	1164.3	1153.3	961.7	951.9
85°	598.0	266.1	85.4	162.3	207.5	270.9	458.9	1153.3	904.3	807.9	756.7
87.5°	152.6	47.6	35.4	79.3	105.0	144.0	250.2	610.2	469.9	413.7	399.1
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)