

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: P591159

Luminaire Tested: **CTN-CA8-230-722-U-T2-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591159
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-CA8-230-722-U-T2-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (8) 2200K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16033 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

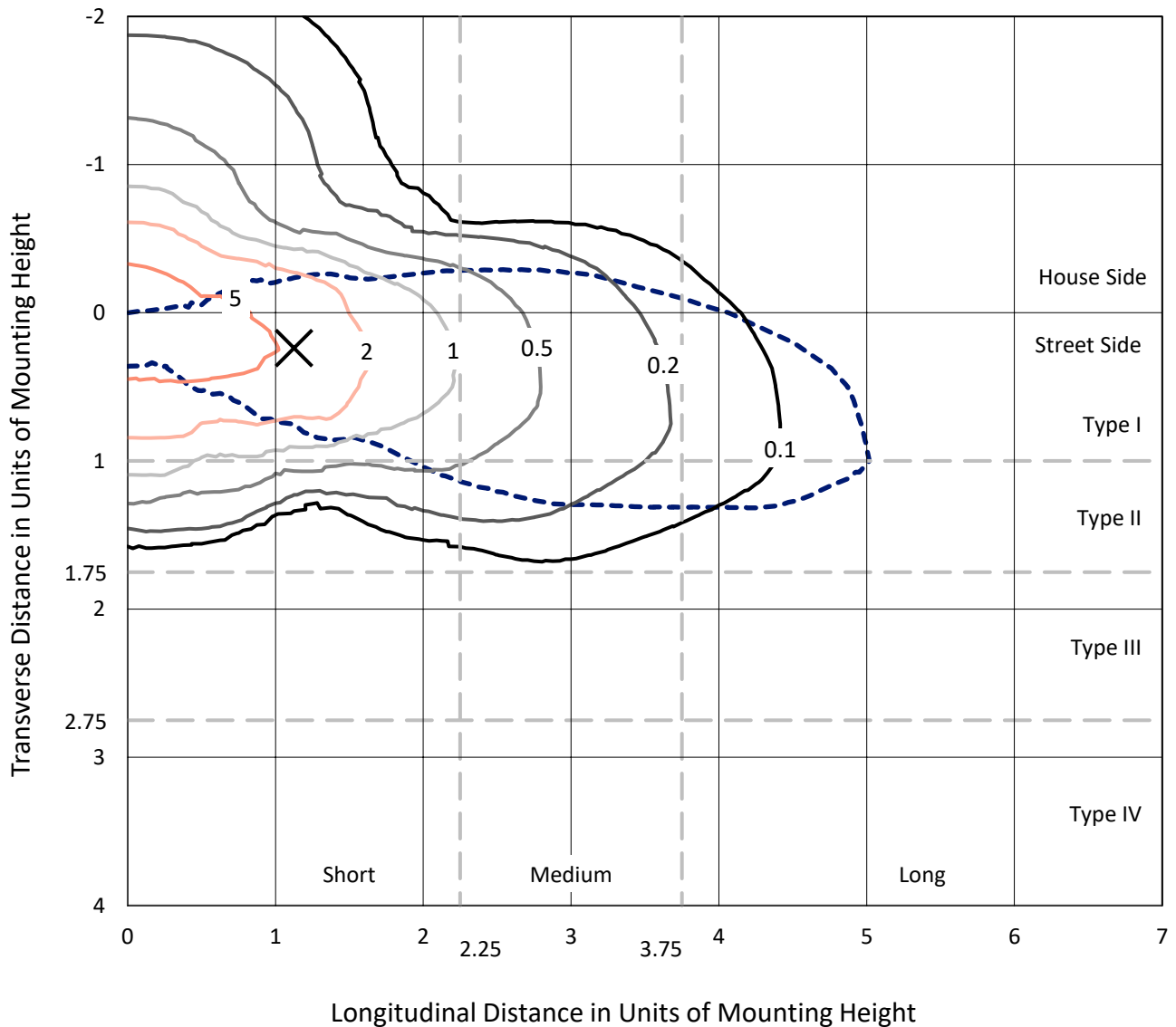
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

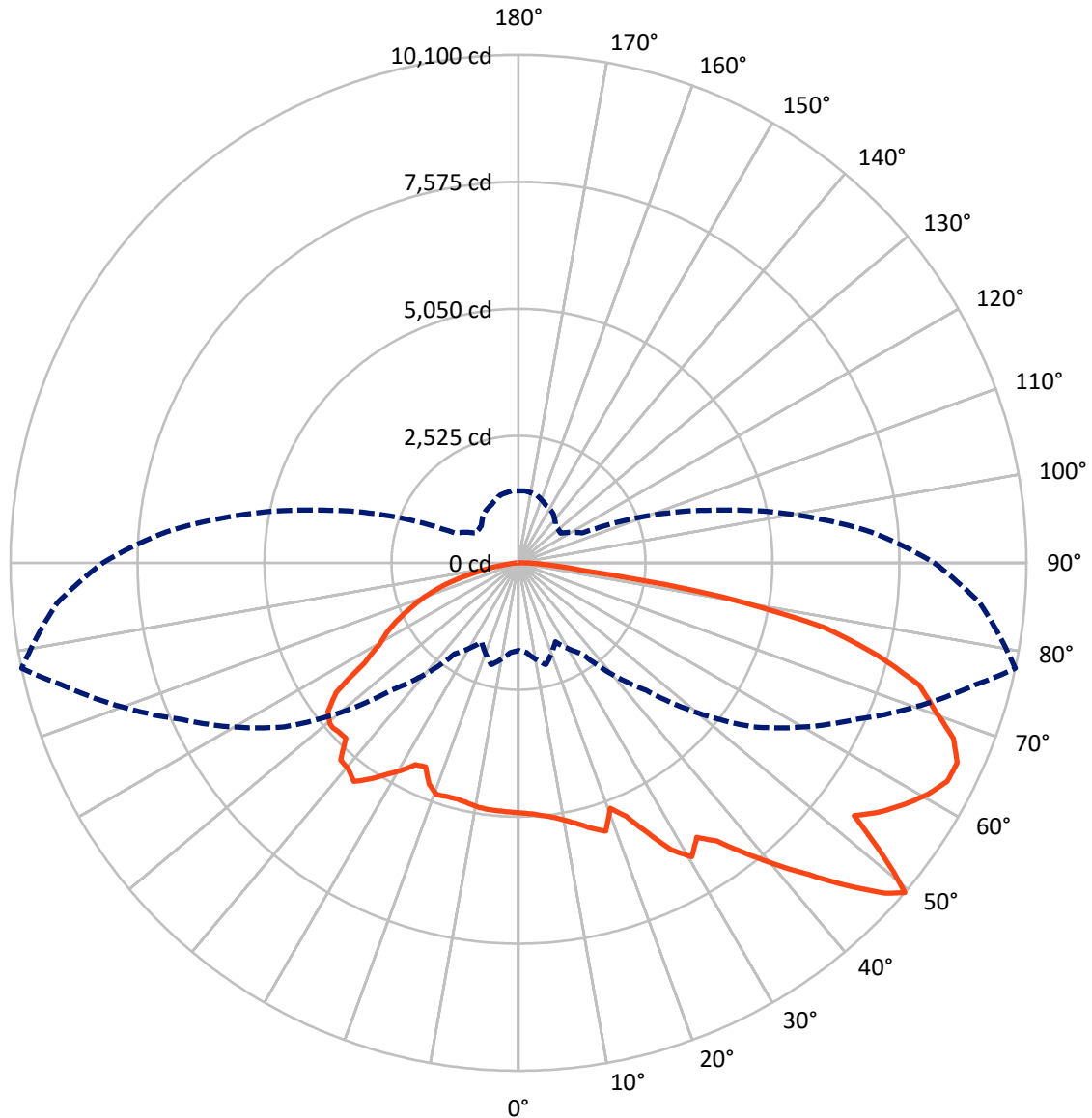
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.2 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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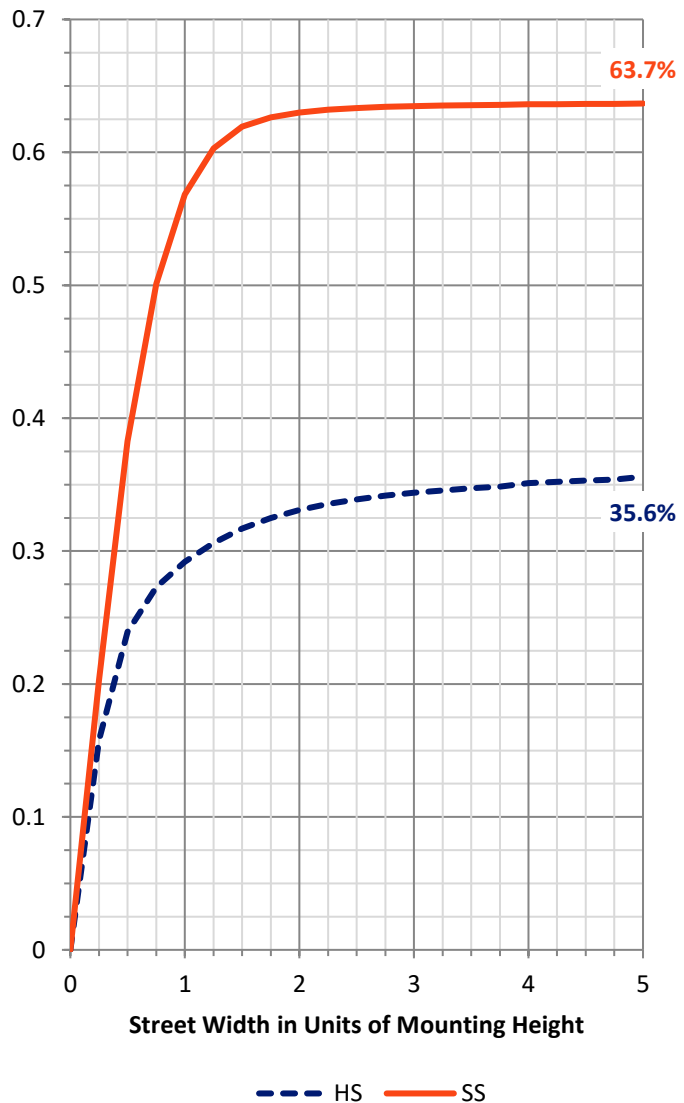
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5857.1	0.0	5857.1
	% Fixture	36.5	0.0	36.5
Street Side	Lumens	10175.9	0.0	10175.9
	% Fixture	63.5	0.0	63.5
Total	Lumens	16033.0	0.0	16033.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.9	3.0
10°-20°	1417.2	8.8
20°-30°	1995.3	12.4
30°-40°	2501.2	15.6
40°-50°	2823.2	17.6
50°-60°	2712.7	16.9
60°-70°	2216.1	13.8
70°-80°	1554.6	9.7
80°-90°	331.0	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°	16033.0	100.0
0°-180°	16033.0	100.0

Coefficient of Utilization



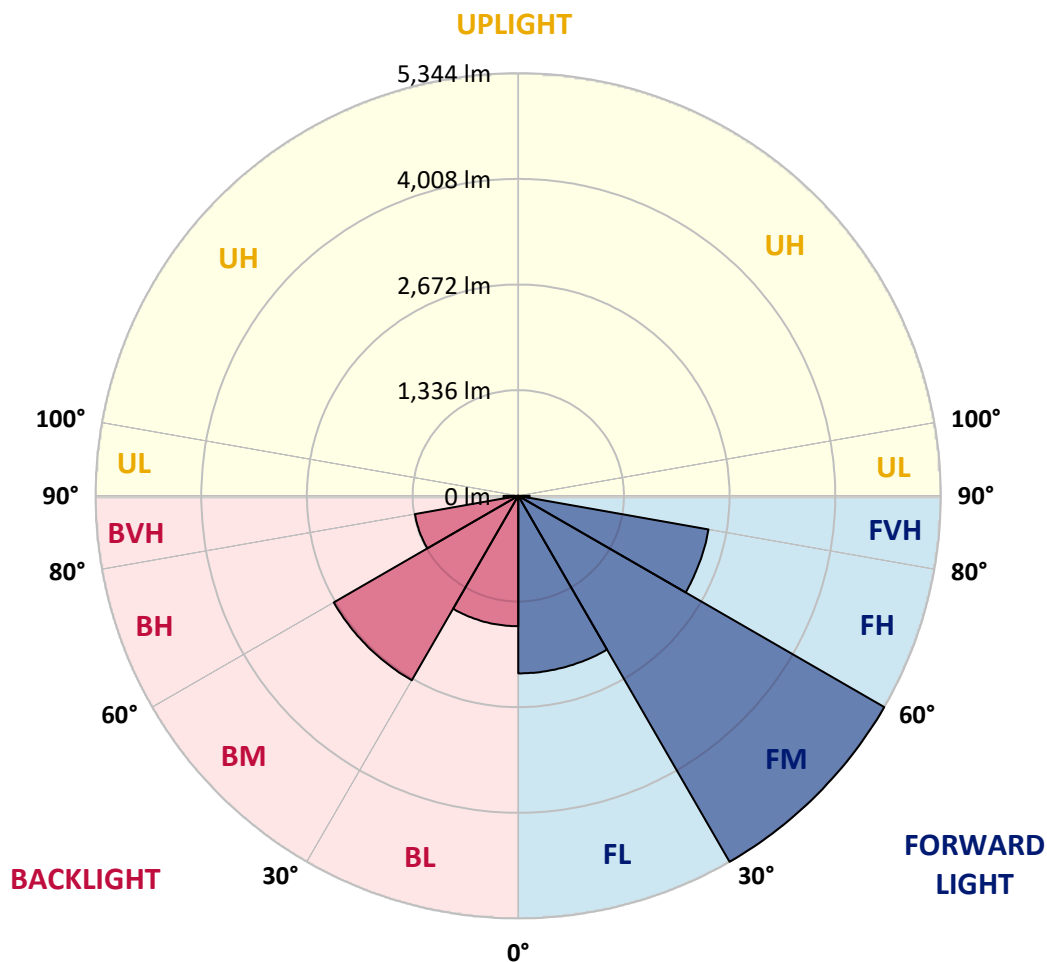
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2245.1	14.0			
FM (30°-60°)	5343.6	33.3			
FH (60°-80°)	2443.1	15.2			G2/5000
FVH (80°-90°)	144.1	0.9			G2/225
BL (0°-30°)	1649.3	10.3	B3/2500		
BM (30°-60°)	2693.4	16.8	B3/5000		
BH (60°-80°)	1327.6	8.3	B3/2500		G3/2500
BVH (80°-90°)	186.8	1.2			G2/225
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°	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1
2.5°	5178.0	5130.2	5141.0	5166.3	5068.8	5095.8	5052.5	5071.5	5020.0	4998.3	5007.4
5°	5547.3	5491.3	5504.0	5516.6	5373.0	5311.6	5190.7	5162.7	5084.1	5048.0	5043.5
7.5°	5723.4	5665.6	5679.1	5679.1	5569.9	5579.8	5457.0	5327.0	5169.9	5113.0	5087.7
10°	6006.0	5940.9	5931.0	5913.9	5771.2	5708.0	5606.0	5530.1	5291.8	5210.5	5141.0
12.5°	6212.7	6162.1	6163.1	6144.1	5983.4	5937.3	5757.7	5668.3	5432.6	5334.2	5222.3
15°	6298.5	6262.4	6285.8	6229.0	6121.5	6052.9	5968.0	5824.5	5580.7	5479.6	5341.4
17.5°	5898.5	5833.5	5661.1	5690.8	5683.6	5704.4	5621.3	5706.2	5667.4	5612.3	5521.1
20°	4994.7	5063.3	5184.3	5076.9	5068.8	5338.7	5531.9	5505.8	5289.1	5208.7	5299.9
22.5°	4244.4	4160.5	4416.0	4797.9	4905.3	5180.7	5509.4	5821.8	5577.1	5474.2	5197.9
25°	3570.9	3655.8	4053.0	4630.9	4968.5	5049.8	5426.3	6014.1	6052.9	5940.9	5582.5
27.5°	3464.3	3463.4	3731.6	4291.4	5059.7	5314.3	5429.9	5918.4	6534.1	6457.4	6045.7
30°	3440.0	3427.3	3529.4	4096.4	4811.4	5551.8	5776.6	5948.2	6530.5	6786.9	6574.8
32.5°	3335.2	3325.3	3430.0	3696.4	4473.8	5778.4	6108.9	6334.6	6368.0	6508.0	7112.0
35°	3167.3	3190.8	3328.0	3622.4	4196.6	5332.4	6445.7	6798.7	6879.0	6796.9	6801.4
37.5°	3006.6	3024.6	3165.5	3490.5	3994.3	4337.4	6676.8	7244.7	7423.5	7329.6	6890.8
40°	2798.0	2823.3	2990.3	3350.6	3861.6	3743.3	6341.8	7768.4	8016.7	7896.6	7399.1
42.5°	2563.3	2575.0	2772.7	3120.4	2769.1	3763.2	5867.8	8248.7	8596.3	8477.1	7876.7
45°	2362.8	2370.1	2531.7	2752.9	2496.5	3731.6	5540.1	8021.2	9273.5	9154.3	8382.3
47.5°	2081.1	2132.6	2307.8	1903.3	2318.6	3654.0	5650.2	7112.9	9908.2	9819.7	8873.5
49°	1743.5	1789.5	2097.4	1733.5	2208.4	3584.4	5688.1	7378.3	9393.6	10099.6	9210.3
50°	1602.6	1636.0	1607.1	1673.0	2128.1	3514.0	5627.6	7592.3	8633.3	9672.5	9427.0
52.5°	1393.1	1296.5	1104.2	1502.4	1943.0	3239.5	4637.2	8167.4	8553.9	8358.9	8832.9
55°	588.7	838.8	976.9	1232.4	1756.1	1966.5	4294.1	8794.0	8937.6	8740.8	7937.2
57.5°	460.5	469.5	537.2	917.3	971.5	1523.2	4154.1	9063.1	9227.4	9056.8	8245.1
60°	67.7	66.8	88.5	105.6	241.1	700.6	2715.0	6451.1	8906.0	9351.1	8526.8
62.5°	24.4	25.3	25.3	29.8	44.2	307.0	1973.7	6018.6	9120.9	9566.9	8762.4
65°	1.8	2.7	4.5	9.9	23.5	289.8	1750.7	6125.1	9051.4	9587.7	8877.1
67.5°	0.0	0.9	2.7	7.2	19.0	285.3	1627.9	5945.5	8759.7	9324.0	8626.1
70°	0.0	0.0	1.8	6.3	17.2	274.5	1413.9	5336.0	8237.9	8783.2	8169.3
72.5°	0.0	0.0	1.8	6.3	15.3	261.8	1162.0	4697.7	7763.0	8333.6	7506.5
75°	0.0	0.0	1.8	5.4	13.5	238.4	849.6	3404.8	6954.0	7390.1	6565.7
77.5°	0.0	0.0	1.8	5.4	12.6	205.9	574.2	1951.1	5721.5	6248.8	5516.6
80°	0.0	0.0	1.8	4.5	11.7	156.2	325.0	974.2	2990.3	4107.2	3942.9
82.5°	0.0	0.0	1.8	4.5	9.0	83.1	151.7	425.3	1102.4	1301.0	1518.6
85°	0.0	0.0	1.8	3.6	7.2	20.8	51.5	202.2	602.2	669.0	652.8
87.5°	0.0	0.0	1.8	3.6	5.4	8.1	17.2	57.8	223.0	249.2	213.1
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°	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1	4973.1
2.5°	5005.6	4977.6	4951.4	4955.0	4892.7	4879.2	4820.5	4856.6	4832.2	4801.5	4821.4
5°	5016.4	4980.3	4934.2	4882.8	4746.4	4697.7	4616.4	4639.9	4607.4	4571.3	4590.2
7.5°	5039.9	4997.4	4921.6	4788.0	4629.1	4543.3	4449.4	4529.7	4519.8	4499.0	4519.8
10°	5049.8	5012.8	4883.7	4728.4	4508.1	4449.4	4378.1	4364.5	4367.2	4371.7	4402.4
12.5°	5076.0	5020.9	4822.3	4638.1	4437.7	4321.2	4250.8	4292.3	4206.5	4168.6	4184.8
15°	5140.1	5035.4	4774.4	4512.6	4313.1	4221.0	4047.6	4047.6	4025.9	3988.9	3999.8
17.5°	5269.2	5093.1	4761.8	4429.5	4174.0	4015.1	3856.2	3772.2	3748.8	3760.5	3767.7
20°	5338.7	5199.7	4755.5	4320.3	4017.8	3833.6	3592.6	3533.0	3454.4	3465.3	3477.9
22.5°	4920.7	4739.2	4745.5	4186.7	3824.6	3590.8	3327.1	3223.3	3175.4	3166.4	3190.8
25°	5218.6	4853.0	4288.7	4113.5	3612.4	3314.5	3047.2	2904.6	2831.4	2826.9	2842.3
27.5°	5614.1	5166.3	4225.5	3770.4	3386.7	2979.5	2684.3	2582.2	2510.0	2506.4	2509.1
30°	6074.6	5584.3	4382.6	3347.9	3080.6	2593.1	2358.3	2286.1	2220.2	2191.3	2192.2
32.5°	6586.5	5962.6	4534.3	3266.6	2469.4	2256.3	2073.9	2017.9	1927.6	1886.1	1874.4
35°	7065.9	6364.4	4723.9	3130.3	2142.5	1956.5	1828.3	1753.4	1683.0	1647.8	1636.0
37.5°	6643.4	6734.6	4891.8	3018.3	1893.3	1621.6	1586.4	1536.7	1500.6	1473.5	1469.0
40°	6740.0	6066.4	4991.1	2807.1	1636.0	1416.6	1359.7	1384.1	1421.1	1398.6	1397.7
42.5°	7062.3	6170.3	4900.8	2514.5	1432.0	1221.6	1237.8	1329.0	1406.7	1392.2	1394.0
45°	7523.7	6494.4	4205.6	2165.1	1234.2	1100.6	1206.2	1312.8	1410.3	1414.8	1414.8
47.5°	8001.3	6859.2	4076.5	1699.2	1088.9	1053.7	1200.8	1292.9	1404.9	1433.8	1430.2
49°	8265.9	7036.1	4040.4	1398.6	1023.9	1043.7	1199.9	1274.0	1394.0	1434.7	1430.2
50°	8420.3	7157.1	3972.7	1278.5	985.9	1041.9	1200.8	1262.2	1383.2	1428.4	1426.5
52.5°	8744.4	7310.6	3736.1	1052.8	893.9	1035.6	1215.3	1251.4	1349.8	1397.7	1415.7
55°	7225.7	7051.5	3338.8	945.3	852.3	1023.0	1215.3	1257.7	1320.9	1348.9	1366.1
57.5°	7315.1	6029.4	2625.6	892.0	824.3	1009.4	1196.3	1256.8	1305.6	1310.1	1304.7
60°	7587.8	6169.4	1957.4	837.9	791.8	992.3	1155.7	1227.9	1264.9	1264.9	1248.7
62.5°	7751.2	6235.3	1565.6	778.3	757.5	957.1	1095.2	1171.9	1199.9	1184.6	1181.9
65°	7791.8	6288.6	1135.8	714.2	718.7	919.1	1032.9	1099.7	1138.5	1112.3	1117.8
67.5°	7651.9	5908.4	829.7	648.3	674.5	867.7	971.5	1031.1	1059.1	1045.5	1048.2
70°	7134.6	5494.9	584.2	535.4	603.1	788.2	893.9	962.5	976.9	953.4	957.1
72.5°	6303.0	4856.6	368.4	418.9	530.9	715.1	802.7	846.0	848.7	877.6	892.9
75°	5489.5	3896.8	266.3	330.5	421.6	611.2	733.1	773.8	803.6	948.0	971.5
77.5°	4399.7	2465.8	226.6	260.9	331.4	507.4	653.7	716.0	984.1	1055.5	1037.4
80°	2666.2	1531.3	170.6	205.9	276.3	390.0	559.8	737.7	995.9	929.1	891.1
82.5°	1230.6	665.4	115.6	167.9	219.4	290.7	441.5	861.3	853.2	711.5	704.2
85°	442.4	196.8	63.2	120.1	153.5	200.4	339.5	853.2	669.0	597.7	559.8
87.5°	112.9	35.2	26.2	58.7	77.6	106.5	185.1	451.4	347.6	306.1	295.2
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)