

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: P591444

Luminaire Tested: **CTN-CA8-230-740-U-T1-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591444  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-3)  
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-T1-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: 22781 lumens  
Efficiency: N/A  
Efficacy: 99.7 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B4 - U0 - G4

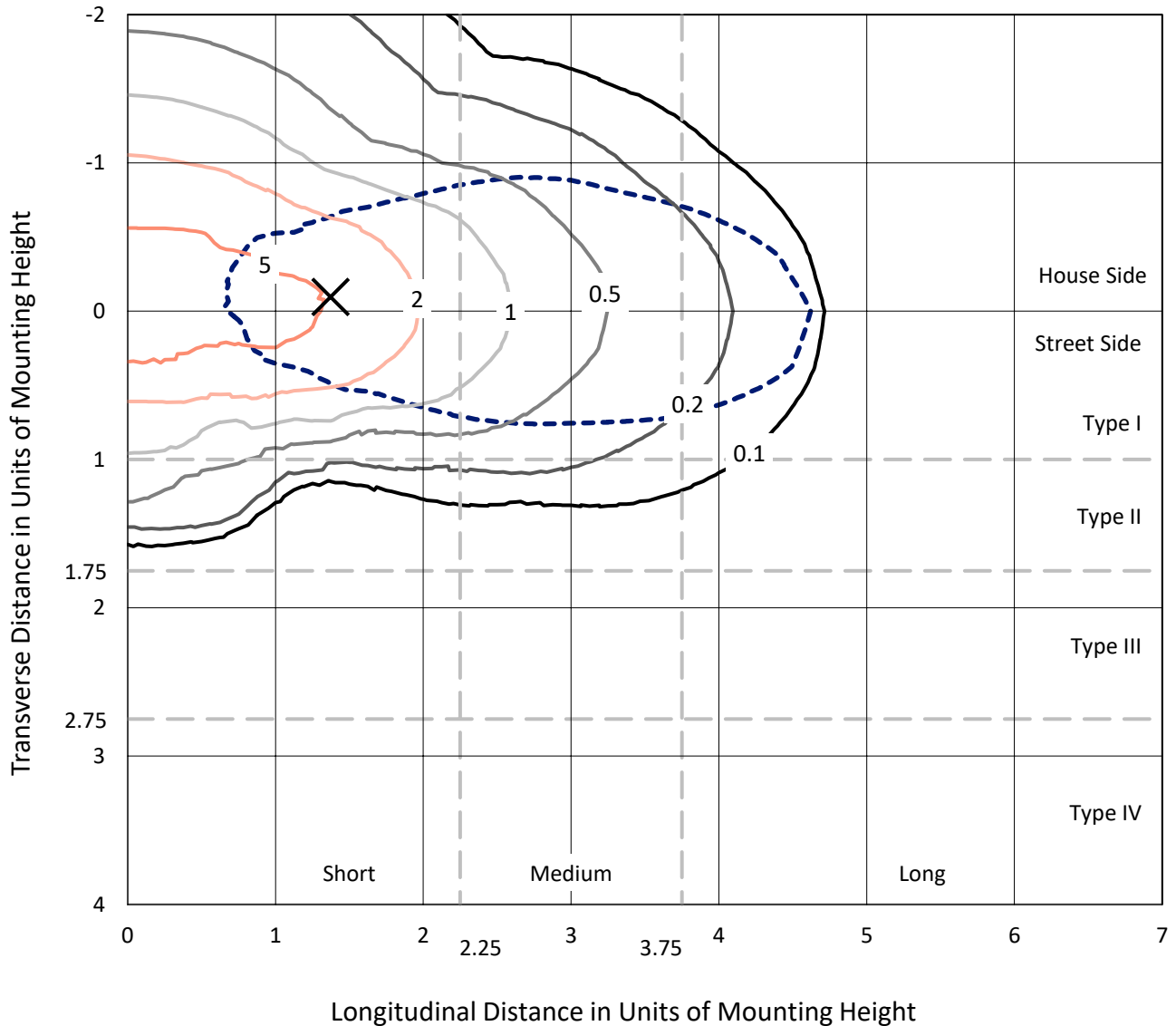
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

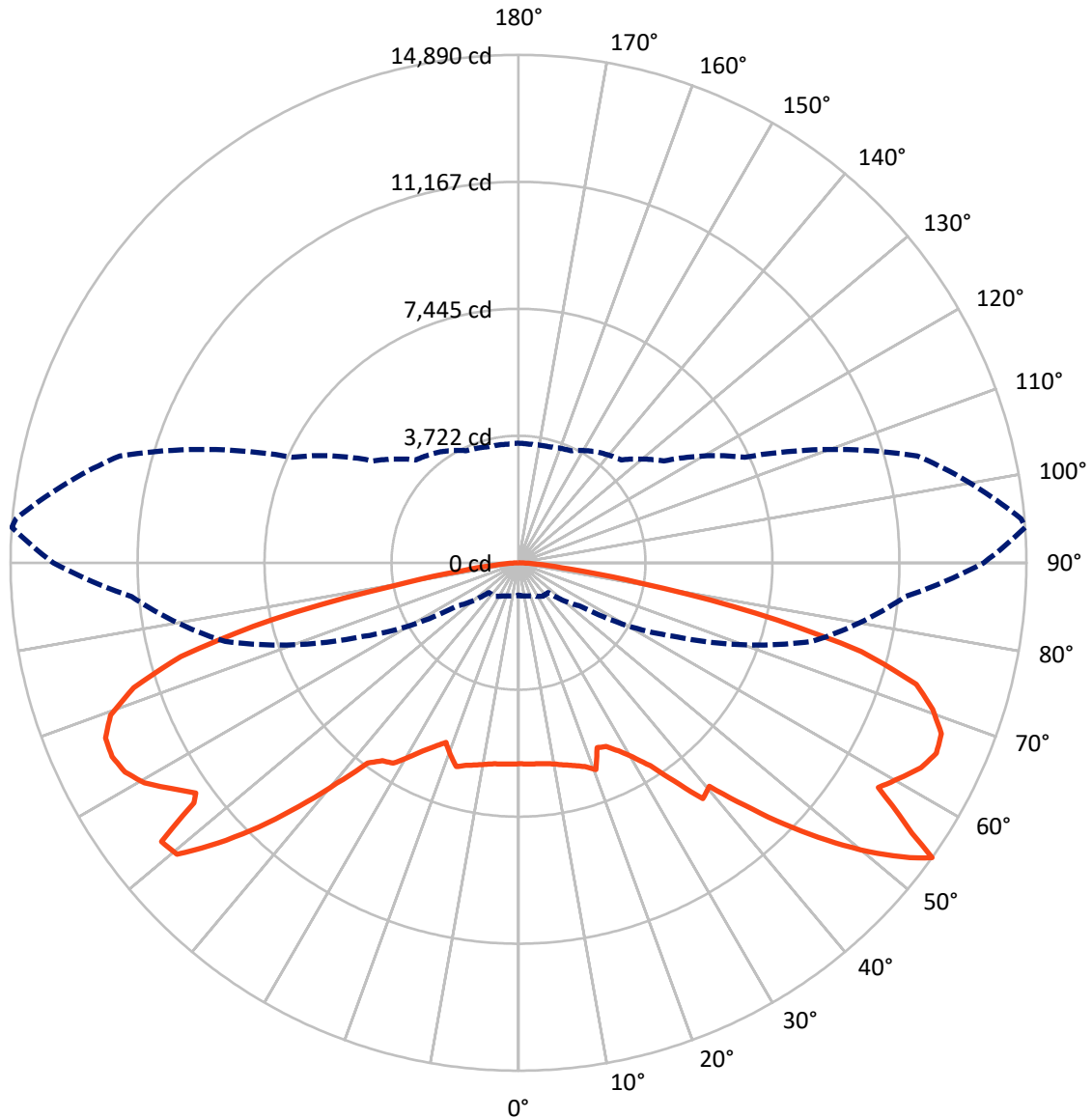
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.4 fc  
 Type I - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 94-Deg Lateral      - - - Horizontal Cone Through 54-Deg Vertical

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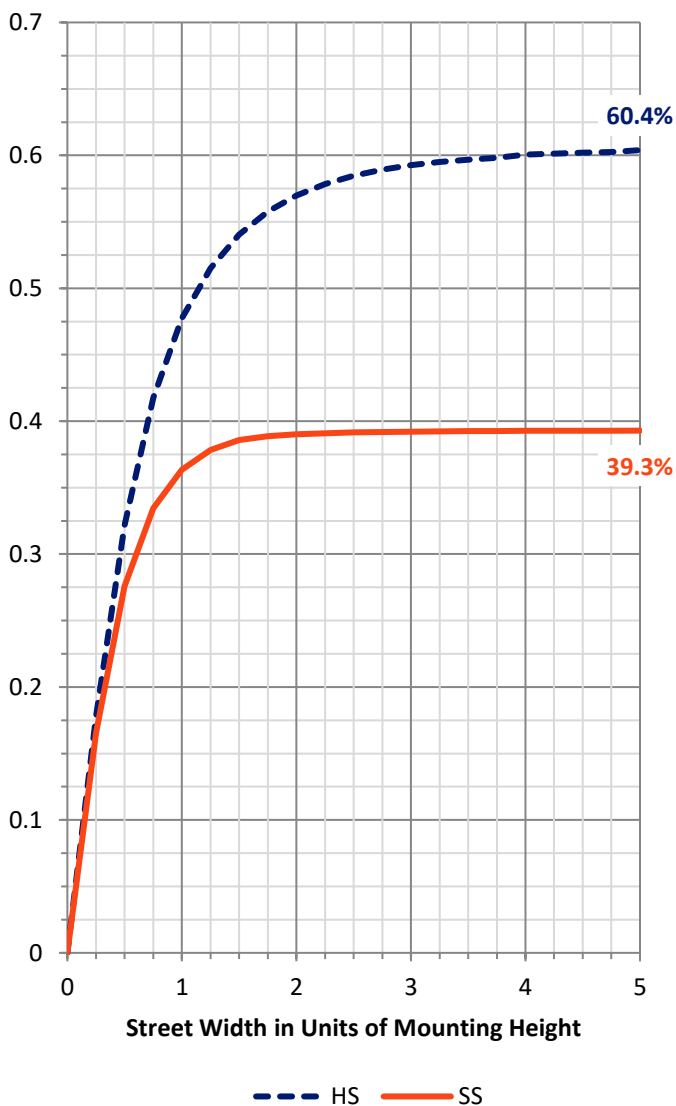
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	13875.5	0.0	13875.5
	% Fixture	60.9	0.0	60.9
<b>Street Side</b>	Lumens	8905.5	0.0	8905.5
	% Fixture	39.1	0.0	39.1
<b>Total</b>	Lumens	22781.0	0.0	22781.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	562.2	2.5
10°-20°	1608.5	7.1
20°-30°	2297.4	10.1
30°-40°	3039.8	13.3
40°-50°	4001.6	17.6
50°-60°	4414.9	19.4
60°-70°	3978.2	17.5
70°-80°	2515.9	11.0
80°-90°	362.6	1.6
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°	22781.0	100.0
0°-180°	22781.0	100.0

**Coefficient of Utilization**

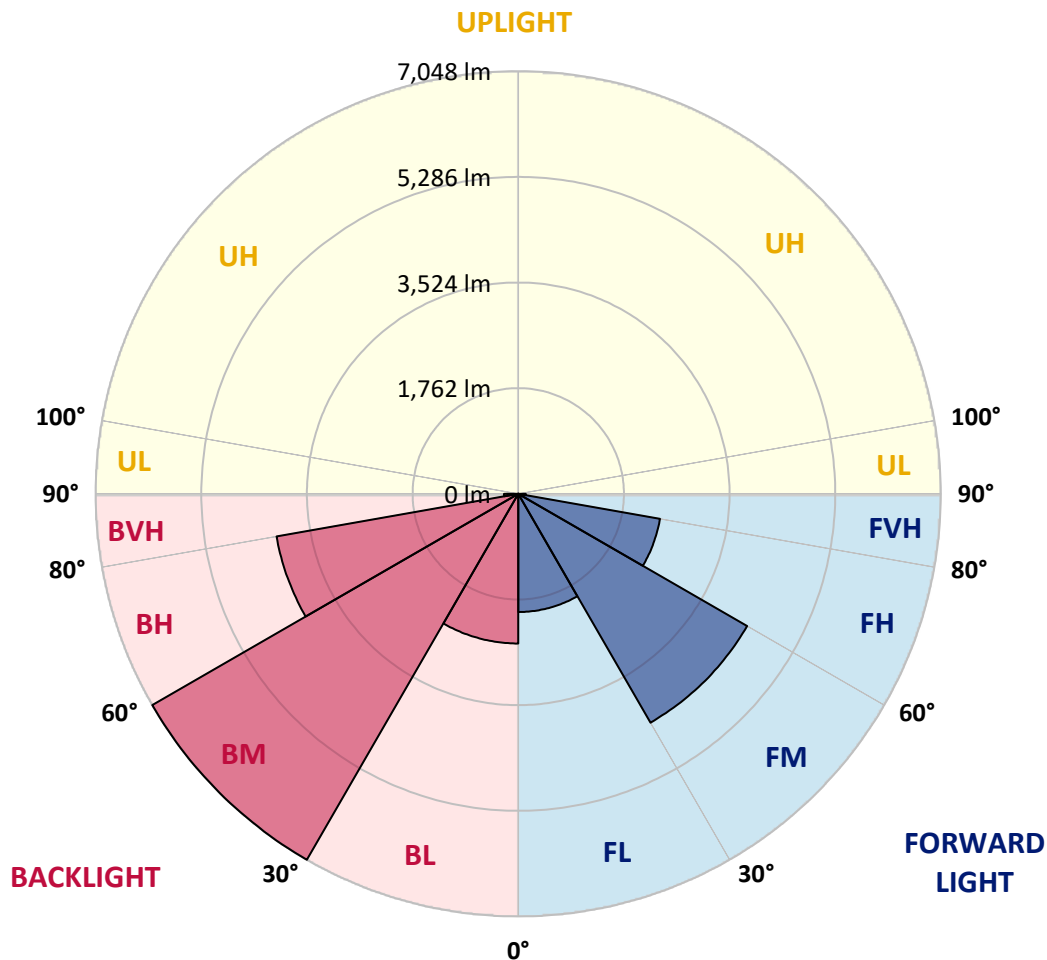


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1971.5	8.7			
FM (30°-60°)	4407.9	19.3			
FH (60°-80°)	2400.5	10.5			G2/5000
FVH (80°-90°)	125.5	0.6			G2/225
BL (0°-30°)	2496.6	11.0	B3/2500		
BM (30°-60°)	7048.4	30.9	B4/8500		
BH (60°-80°)	4093.6	18.0	B4/5000		G4/5000
BVH (80°-90°)	237.0	1.0			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**  
 Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6
2.5°	5901.7	5860.7	5866.2	5909.4	5817.5	5875.1	5848.5	5896.1	5877.3	5903.9	5923.8
5°	5849.6	5810.8	5820.8	5874.0	5800.8	5866.2	5828.5	5875.1	5881.7	5913.8	5932.7
7.5°	5806.4	5768.7	5775.4	5825.2	5778.7	5836.3	5814.1	5876.2	5877.3	5933.8	5948.2
10°	5763.2	5724.4	5733.3	5776.5	5746.6	5808.6	5823.0	5896.1	5912.7	5991.4	5992.5
12.5°	5671.2	5636.9	5641.3	5701.1	5702.2	5792.0	5820.8	5933.8	5968.1	6056.8	6065.6
15°	5308.9	5333.3	5426.4	5501.7	5571.5	5692.3	5790.9	5975.9	6022.4	6129.9	6155.4
17.5°	4431.5	4393.8	4191.1	4298.6	4634.3	4955.5	5126.1	5512.8	5946.0	6241.8	6275.0
20°	3107.6	3167.4	3485.4	3631.6	3870.9	4452.6	4986.6	5209.2	5349.9	5885.0	6302.7
22.5°	2465.0	2482.8	2938.1	3484.3	3663.8	3914.1	4547.8	5291.2	5511.7	5666.8	5735.5
25°	2294.4	2307.7	2380.8	3095.4	3585.1	3851.0	4129.1	5096.2	5702.2	5895.0	5977.0
27.5°	2151.5	2165.9	2237.9	2478.3	3513.1	3851.0	4166.7	4613.2	5887.3	6179.7	6249.5
30°	2045.1	2045.1	2119.4	2324.3	2944.7	3863.2	4245.4	4667.5	5599.2	6538.7	6600.7
32.5°	1947.6	1948.8	2029.6	2226.8	2551.4	3811.1	4356.2	4866.9	5375.4	6897.6	7058.3
35°	1860.1	1863.4	1936.6	2136.0	2451.7	3072.1	4479.1	5122.8	5805.3	6857.8	7754.0
37.5°	1785.9	1788.1	1851.3	2046.2	2367.5	2225.7	4558.9	5430.8	6382.5	7213.4	7899.2
40°	1732.7	1729.4	1774.8	1952.1	2244.6	2034.1	3858.7	5751.0	7068.3	8326.8	8581.6
42.5°	1679.5	1674.0	1719.4	1853.5	1535.5	1980.9	3575.1	6063.4	7858.2	9549.9	9777.0
45°	1617.5	1619.7	1664.0	1662.9	1453.5	1910.0	3606.1	5340.0	8703.5	10800.7	11089.9
47.5°	1584.3	1574.3	1596.5	1207.6	1386.0	1812.5	3592.8	4957.8	9449.1	11996.1	12283.0
50°	1522.2	1520.0	1119.0	1144.4	1318.4	1700.6	3384.6	5095.1	8526.2	13104.0	13394.2
52.5°	1429.2	1261.9	1038.1	1100.1	1250.8	1568.8	2417.4	5151.6	8503.0	12994.3	14430.1
54°	949.5	972.7	1004.8	1069.1	1202.0	1233.1	2211.3	5147.2	8907.3	11383.4	13638.0
55°	544.0	762.2	978.3	1043.6	1167.7	863.0	2131.6	5123.9	9165.5	11453.2	12294.1
57.5°	470.8	473.1	538.4	870.8	599.4	740.1	1905.5	4934.5	9648.5	12094.7	12335.1
60°	41.0	39.9	45.4	62.0	78.7	172.8	959.4	3165.2	9310.6	12645.3	13018.7
62.5°	16.6	17.7	22.2	29.9	47.6	77.6	793.2	2805.1	9453.5	12981.0	13389.8
65°	3.3	3.3	5.5	10.0	17.7	46.5	675.8	2498.3	9380.4	13090.7	13636.9
67.5°	0.0	0.0	3.3	7.8	14.4	37.7	585.0	2298.8	8962.7	13053.0	13544.9
70°	0.0	0.0	3.3	7.8	13.3	36.6	500.8	2121.6	7926.9	12658.6	13203.7
72.5°	0.0	0.0	3.3	6.6	12.2	33.2	428.7	1873.4	6719.3	11709.2	12451.4
75°	0.0	0.0	3.3	6.6	11.1	29.9	361.2	1607.5	5613.6	10091.7	10983.5
77.5°	0.0	0.0	3.3	6.6	10.0	26.6	283.6	1284.0	4408.2	7317.5	7796.1
80°	0.0	0.0	3.3	6.6	8.9	21.0	209.4	811.0	2445.1	3711.4	3908.6
82.5°	0.0	0.0	2.2	5.5	7.8	13.3	99.7	306.9	1152.2	1699.5	1648.5
85°	0.0	0.0	2.2	5.5	6.6	10.0	43.2	77.6	383.3	563.9	525.1
87.5°	0.0	0.0	2.2	4.4	5.5	6.6	11.1	13.3	121.9	162.9	168.4
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):**

	94°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6	5890.6
2.5°	5910.5	5910.5	5909.4	5938.2	5901.7	5905.0	5870.6	5959.3	5949.3	5921.6	5954.8
5°	5917.2	5922.7	5921.6	5936.0	5907.2	5924.9	5877.3	5964.8	5950.4	5928.3	5962.6
7.5°	5944.9	5954.8	5947.1	5972.6	5915.0	5932.7	5883.9	5960.4	5946.0	5913.8	5950.4
10°	6004.7	6014.7	5999.2	6011.3	5950.4	5941.5	5881.7	5961.5	5930.5	5906.1	5951.5
12.5°	6082.2	6094.4	6063.4	6061.2	5983.6	5965.9	5879.5	5933.8	5888.4	5868.4	5909.4
15°	6168.7	6183.1	6146.5	6138.7	6053.4	5994.7	5870.6	5882.8	5817.5	5790.9	5834.1
17.5°	6281.7	6295.0	6267.3	6262.8	6152.0	6052.3	5858.5	5818.6	5726.6	5704.5	5727.7
20°	6471.1	6480.0	6443.4	6410.2	6247.3	6083.4	5838.5	5734.4	5593.7	5547.1	5573.7
22.5°	5889.5	5960.4	6679.4	6555.3	6318.2	6115.5	5788.7	5614.7	5417.5	5330.0	5347.7
25°	5965.9	5972.6	6245.1	6727.0	6395.8	6136.5	5729.9	5466.3	5194.8	5067.4	5089.6
27.5°	6242.9	6235.1	6127.7	6745.9	6487.7	6148.7	5656.8	5310.1	4974.4	4821.5	4827.0
30°	6601.8	6589.7	6426.8	6098.9	6619.6	6153.2	5592.6	5130.6	4778.3	4615.4	4611.0
32.5°	7092.6	7058.3	6805.7	6352.6	6062.3	6183.1	5501.7	4960.0	4591.0	4430.4	4418.2
35°	7846.0	7782.8	7323.1	6675.0	5965.9	6183.1	5377.6	4776.1	4418.2	4265.3	4256.5
37.5°	8779.9	8796.5	7984.5	7036.1	6114.4	5603.6	5229.2	4604.3	4268.7	4133.5	4133.5
40°	8612.6	8833.1	8752.2	7406.2	6267.3	5510.6	5069.6	4439.3	4144.6	4041.5	4054.8
42.5°	9717.2	9631.9	9643.0	7777.3	6374.7	5415.3	4896.8	4286.4	4034.9	3947.4	3957.3
45°	10942.5	10846.1	8827.6	8109.7	6424.6	5273.5	4721.8	4129.1	3914.1	3841.0	3867.6
47.5°	12152.3	12065.9	9693.9	8028.8	6378.1	5056.4	4505.7	3992.8	3786.7	3734.7	3774.5
50°	13323.3	13201.5	10627.9	7176.8	6213.0	4756.1	4285.3	3849.9	3675.9	3644.9	3674.8
52.5°	14368.1	14206.3	11574.0	7305.3	5427.5	4452.6	4089.2	3712.5	3575.1	3540.8	3570.7
54°	14889.9	14791.3	12102.5	7319.7	5202.6	4264.2	3971.7	3625.0	3518.6	3489.8	3506.4
55°	14001.4	14198.6	12416.0	7307.6	5039.7	4150.1	3894.2	3567.4	3478.7	3447.7	3464.3
57.5°	12433.7	12221.0	11608.3	7158.0	4596.6	3864.3	3667.1	3421.1	3360.2	3320.3	3343.6
60°	12828.1	12789.3	10596.8	6829.0	4112.4	3544.1	3443.3	3250.5	3209.5	3176.3	3207.3
62.5°	13240.2	13214.8	10758.6	6318.2	3630.5	3229.5	3186.3	3051.1	3026.7	3012.3	3020.1
65°	13462.9	13300.1	10754.2	5634.7	3188.5	2907.1	2900.4	2799.6	2810.7	2804.0	2836.2
67.5°	13368.8	13194.8	10278.9	5141.7	2773.0	2539.3	2560.3	2518.2	2559.2	2571.4	2595.8
70°	12876.9	12933.4	9243.0	4666.4	2359.8	2138.2	2204.7	2199.1	2259.0	2305.5	2344.3
72.5°	12196.6	11979.5	7747.4	3966.2	1727.2	1521.1	1636.3	1713.9	1780.4	1835.8	1872.3
75°	10380.8	10126.0	5720.0	3092.1	1250.8	1049.2	1080.2	1114.5	1157.7	1285.1	1360.5
77.5°	7117.0	7010.6	4113.5	2332.1	796.6	632.6	753.4	822.0	858.6	853.1	866.4
80°	3649.3	3630.5	2435.1	1394.8	537.3	463.1	548.4	555.0	613.8	659.2	661.4
82.5°	1471.3	1544.4	972.7	764.4	373.4	350.1	386.6	435.4	485.3	511.8	518.5
85°	520.7	508.5	295.8	359.0	237.1	244.8	273.6	329.0	381.1	387.8	373.4
87.5°	139.6	145.1	63.1	131.8	129.6	141.8	157.3	179.5	217.1	228.2	217.1
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)