

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: P591405

Luminaire Tested: **CTN-CA10-310-740-U-T4-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591405
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-12)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA10-310-740-U-T4-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (10) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21302 lumens
Efficiency: N/A
Efficacy: 68.2 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

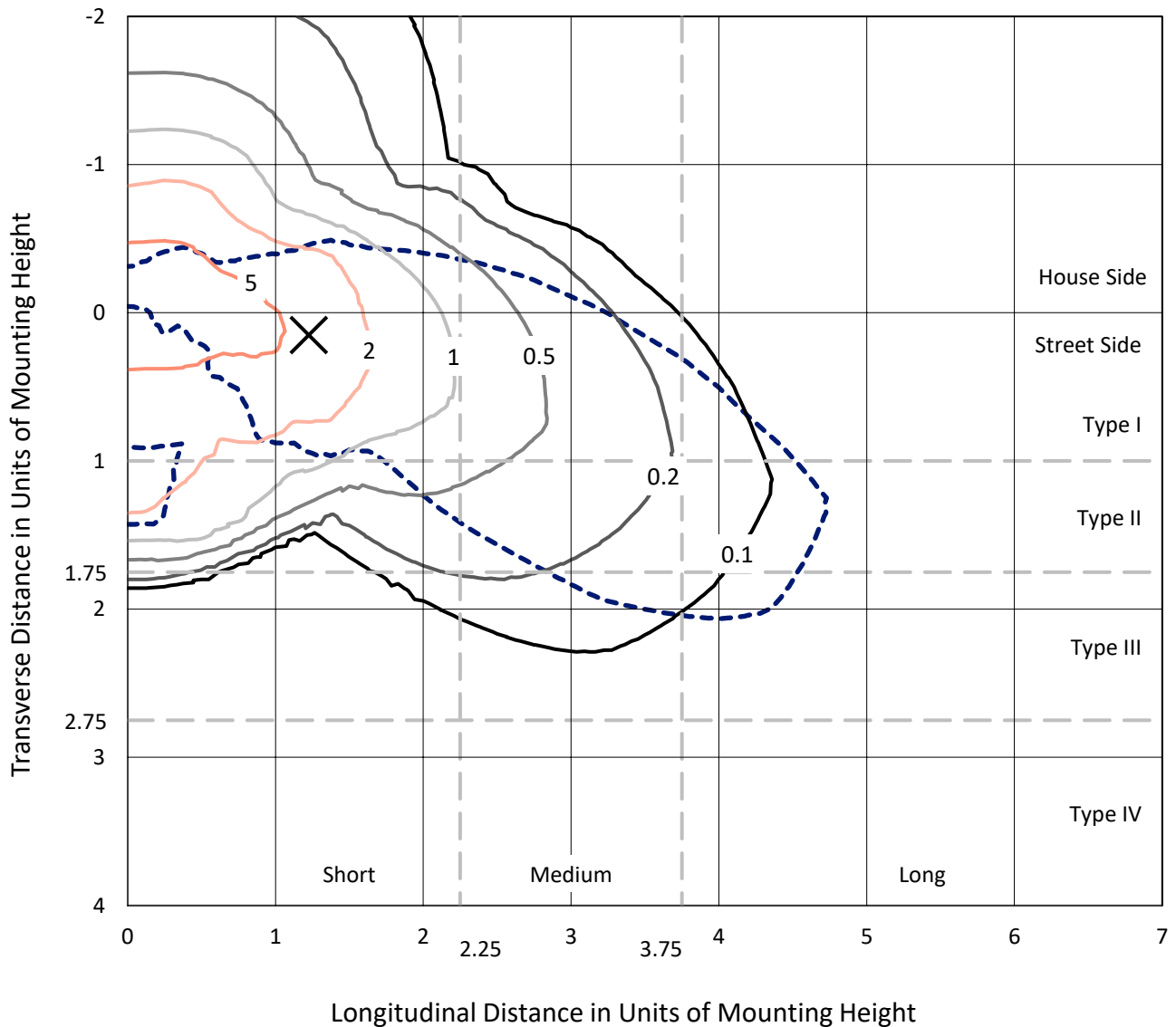
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

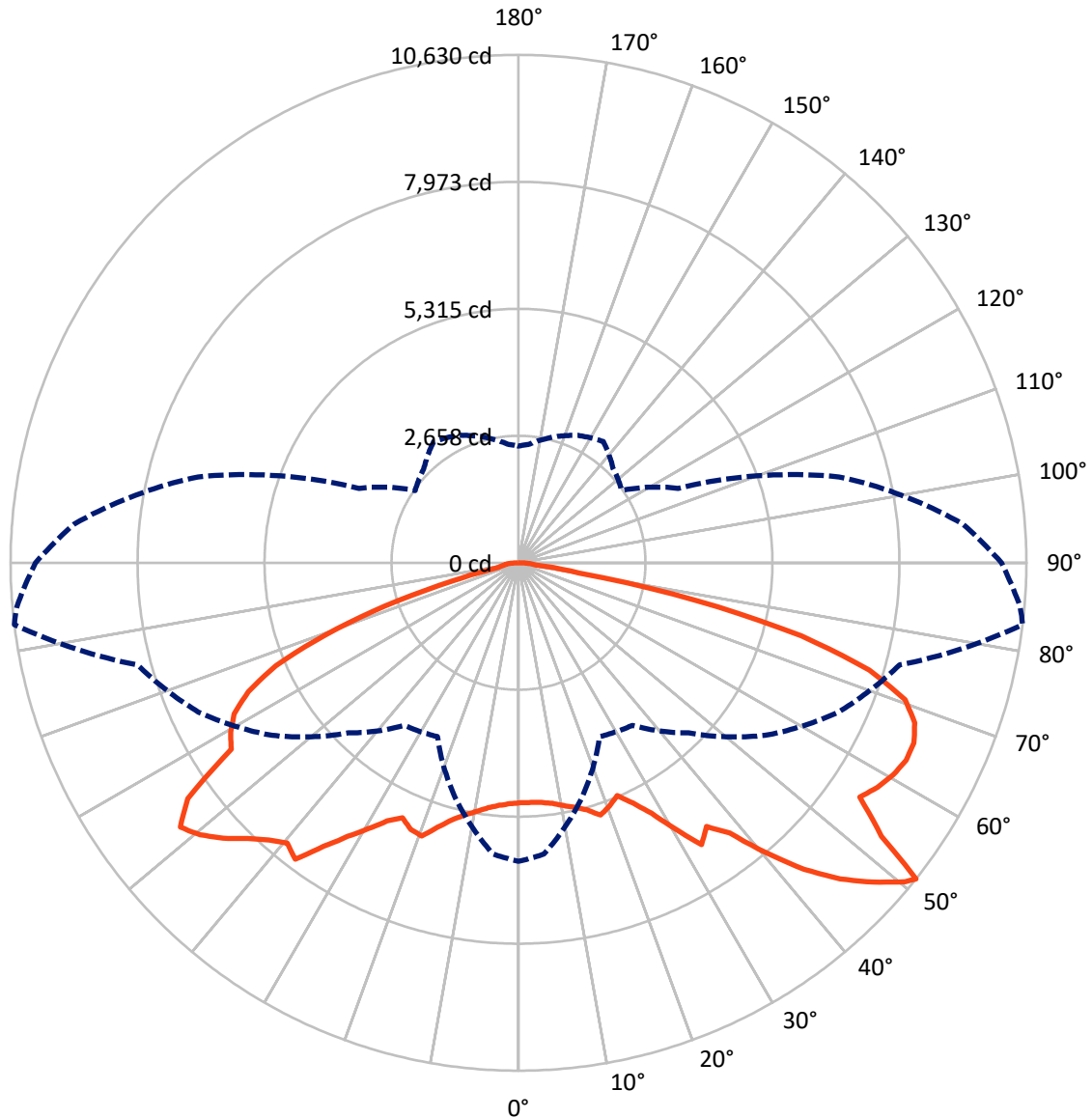
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 83-Deg Lateral - - - Horizontal Cone Through 51-Deg Vertical

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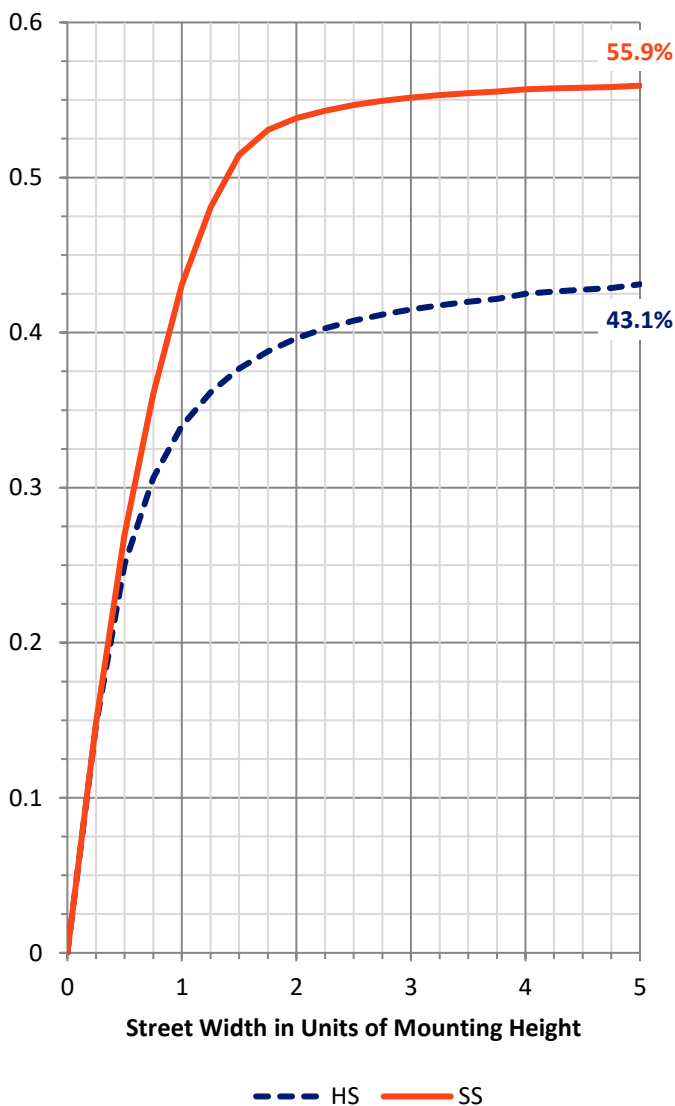
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9389.0	0.0	9389.0
	% Fixture	44.1	0.0	44.1
Street Side	Lumens	11913.0	0.0	11913.0
	% Fixture	55.9	0.0	55.9
Total	Lumens	21302.0	0.0	21302.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	490.5	2.3
10°-20°	1492.7	7.0
20°-30°	2318.8	10.9
30°-40°	3102.6	14.6
40°-50°	4025.2	18.9
50°-60°	4287.0	20.1
60°-70°	2986.3	14.0
70°-80°	2083.5	9.8
80°-90°	515.5	2.4
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°	21302.0	100.0
0°-180°	21302.0	100.0

Coefficient of Utilization



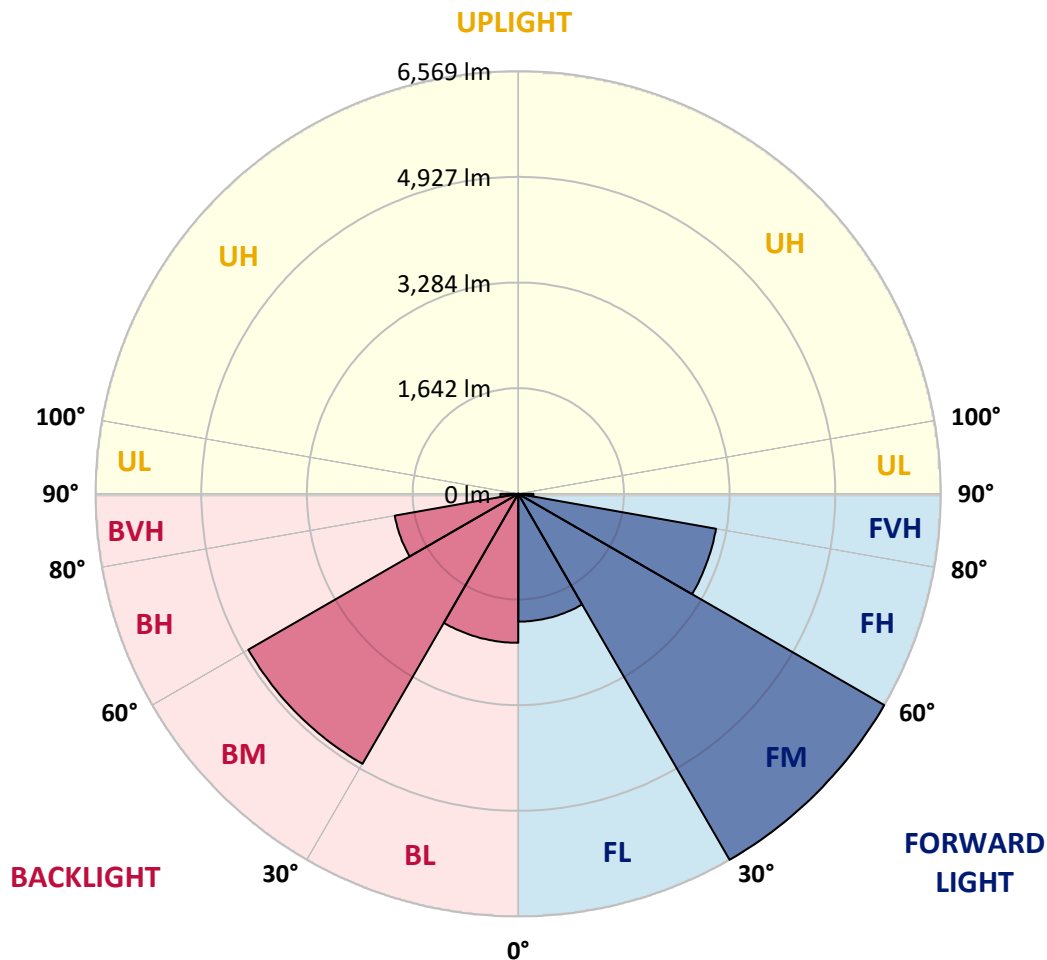
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1986.2	9.3			
FM (30°-60°)	6568.9	30.8			
FH (60°-80°)	3121.2	14.7			G2/5000
FVH (80°-90°)	236.7	1.1			G3/500
BL (0°-30°)	2315.7	10.9	B3/2500		
BM (30°-60°)	4845.9	22.7	B3/5000		
BH (60°-80°)	1948.6	9.1	B3/2500		G3/2500
BVH (80°-90°)	278.8	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°	83°	85°
0°	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9
2.5°	4961.0	4926.6	4929.6	4976.0	4914.6	4955.1	4949.1	5020.9	5007.5	5022.4	5032.9
5°	4917.6	4890.7	4890.7	4952.1	4908.6	4952.1	4922.1	4985.0	5006.0	5038.9	5050.9
7.5°	4926.6	4898.2	4910.1	4964.0	4916.1	4961.0	4959.5	5019.4	5026.9	5085.3	5104.8
10°	4952.1	4920.6	4926.6	4970.0	4943.1	5020.9	5007.5	5089.8	5089.8	5167.7	5197.6
12.5°	4899.6	4878.7	4890.7	4949.1	4973.0	5053.9	5071.9	5155.7	5167.7	5251.5	5289.0
15°	4842.7	4812.8	4851.7	4935.6	4976.0	5092.8	5131.8	5260.5	5278.5	5365.4	5407.3
17.5°	4567.2	4547.7	4619.6	4687.0	4709.5	4823.3	4899.6	5113.8	5371.3	5552.5	5602.0
20°	4019.1	4016.2	3882.9	3854.4	4203.3	4619.6	4672.0	4854.7	5152.7	5435.7	5536.1
22.5°	3355.8	3445.6	3878.4	4016.2	4007.2	4171.9	4842.7	5015.0	5146.7	5290.5	5350.4
25°	3355.8	3348.3	3604.4	4197.3	4198.8	4269.2	4419.0	5281.5	5407.3	5572.0	5619.9
27.5°	3462.1	3469.6	3453.1	3885.9	4405.5	4471.4	4535.8	4982.0	5753.2	5935.9	6015.2
30°	3641.8	3653.8	3587.9	3589.4	4474.4	4672.0	4794.8	4970.0	5994.3	6463.0	6498.9
32.5°	3996.7	3992.2	3909.8	3803.5	3926.3	4868.2	5047.9	5275.5	5613.9	7032.0	7115.9
35°	4279.7	4260.2	4203.3	4130.0	3968.2	4812.8	5289.0	5603.4	6034.7	6778.9	7222.2
37.5°	4594.2	4565.7	4501.3	4411.5	4264.7	3358.8	5527.1	5977.8	6647.2	7175.8	7204.2
40°	4949.1	4917.6	4829.3	4697.5	4510.3	3441.1	5633.4	6440.5	7445.3	7976.9	7972.4
42.5°	5221.6	5190.2	5143.7	5004.5	3965.2	3796.0	4913.1	7090.4	8309.3	8770.6	8731.6
45°	5452.2	5425.3	5429.7	5283.0	3719.7	4231.8	5473.2	7430.3	9123.9	9438.4	9387.5
47.5°	5631.9	5590.0	5476.2	4444.4	3815.5	4532.8	5928.4	6481.0	9811.3	9989.5	9932.6
50°	6069.2	5998.8	5321.9	3945.8	4058.1	4901.1	6361.2	7148.8	8936.8	10491.1	10390.8
51°	6247.4	6120.1	5100.3	4014.7	4153.9	5034.4	6296.8	7391.4	8255.4	10630.4	10540.5
52.5°	6434.5	6183.0	4492.3	4119.5	4270.7	5218.6	5348.9	7764.3	8445.6	9513.3	10043.4
55°	5428.2	5527.1	4639.1	4502.8	4492.3	4510.3	5462.7	8319.8	8842.4	8662.7	8557.9
57.5°	3192.6	3251.0	4712.5	5041.9	3887.4	3581.9	5763.7	8739.1	9185.3	8861.9	8745.1
60°	1605.3	1680.1	1716.1	1564.8	2096.4	3267.4	4854.7	6334.2	9395.0	9011.6	8870.9
62.5°	70.4	116.8	46.4	50.9	85.4	1139.6	3566.9	6506.4	9571.7	9103.0	8917.3
65°	6.0	6.0	7.5	15.0	37.4	1196.5	3969.7	6744.5	9643.6	9094.0	8845.4
67.5°	1.5	1.5	3.0	10.5	27.0	1295.3	4442.9	6841.8	9646.6	8941.3	8637.3
70°	0.0	1.5	3.0	9.0	24.0	1355.2	4546.3	6822.4	9523.8	8581.9	8164.1
72.5°	0.0	0.0	1.5	7.5	21.0	1278.8	4426.5	6783.4	9104.5	7677.4	7084.4
75°	0.0	0.0	1.5	6.0	18.0	1301.3	4438.4	6346.2	7949.9	6112.6	5392.3
77.5°	0.0	0.0	1.5	6.0	16.5	1201.0	4064.1	5495.6	6283.3	3805.0	3017.4
80°	0.0	0.0	1.5	6.0	15.0	1030.2	3342.3	4290.2	3516.0	1290.8	832.6
82.5°	0.0	0.0	1.5	6.0	12.0	697.8	2220.7	2144.3	708.3	369.9	332.4
85°	0.0	0.0	1.5	4.5	9.0	416.3	1112.6	292.0	274.0	235.1	212.6
87.5°	0.0	0.0	1.5	3.0	6.0	176.7	342.9	89.8	113.8	95.8	85.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9	5020.9
2.5°	5041.9	5041.9	5058.4	5113.8	5107.8	5152.7	5127.3	5182.7	5187.2	5176.7	5202.1
5°	5061.4	5079.3	5134.7	5193.1	5169.2	5235.1	5266.5	5339.9	5336.9	5327.9	5357.9
7.5°	5116.8	5154.2	5209.6	5280.0	5305.5	5359.4	5362.4	5462.7	5456.7	5452.2	5482.2
10°	5209.6	5259.0	5320.4	5426.8	5411.8	5489.6	5456.7	5530.1	5528.6	5525.6	5555.5
12.5°	5305.5	5377.3	5452.2	5555.5	5554.0	5557.0	5528.6	5566.0	5558.5	5537.6	5560.0
15°	5440.2	5536.1	5639.4	5714.3	5648.4	5634.9	5572.0	5549.5	5506.1	5446.2	5464.2
17.5°	5663.3	5757.7	5889.5	5929.9	5822.1	5760.7	5590.0	5465.7	5330.9	5239.6	5259.0
20°	5864.0	6039.2	6165.0	6162.0	6024.2	5862.5	5597.5	5387.8	5127.3	4950.6	4935.6
22.5°	5613.9	5908.9	6457.0	6392.6	6151.5	5922.4	5588.5	5263.5	4830.8	4556.7	4546.3
25°	5757.7	5763.7	6254.8	6521.4	6208.4	5896.9	5480.7	5046.4	4492.3	4207.8	4191.4
27.5°	6124.6	6091.6	5955.3	6383.6	6156.0	5766.7	5263.5	4676.5	4183.9	3936.8	3924.8
30°	6560.3	6458.5	6138.0	5715.8	5940.4	5513.6	4929.6	4297.7	3905.3	3680.7	3662.8
32.5°	7081.4	6867.3	6304.3	5642.4	5233.6	5131.8	4498.3	3998.2	3674.7	3441.1	3394.7
35°	7699.9	7379.4	6464.5	5518.1	4682.5	4565.7	4092.5	3728.6	3457.6	3221.0	3174.6
37.5°	7698.4	8032.3	6701.1	5347.4	4341.1	3930.8	3797.5	3549.0	3306.4	3020.4	2967.9
40°	7755.3	7765.8	6961.6	5181.2	4022.1	3604.4	3622.3	3460.6	3210.5	2896.1	2842.2
42.5°	8447.1	7938.0	7280.6	4958.0	3721.2	3363.3	3547.5	3429.2	3159.6	2837.7	2777.8
45°	9049.1	8462.1	6581.3	4714.0	3405.2	3176.1	3487.6	3355.8	3087.7	2767.3	2699.9
47.5°	9573.2	8878.4	6759.5	4287.2	3096.7	3023.3	3372.3	3215.0	2959.0	2661.0	2601.1
50°	9971.5	9222.8	6915.2	3713.7	2797.2	2870.6	3185.1	3024.8	2777.8	2536.7	2485.8
51°	10107.8	9333.6	6946.7	3688.2	2638.5	2798.7	3096.7	2941.0	2719.4	2488.8	2442.3
52.5°	10254.5	9477.3	6993.1	3745.1	2413.9	2680.4	2953.0	2816.7	2632.5	2434.8	2382.4
55°	8526.5	8905.3	6874.8	3625.3	2153.3	2445.3	2689.4	2628.0	2526.2	2351.0	2313.6
57.5°	8215.0	7535.2	5702.3	3069.8	1924.2	2165.3	2433.4	2473.8	2395.9	2217.7	2190.8
60°	8282.4	7466.3	5077.8	2289.6	1696.6	1915.2	2241.7	2277.6	2210.2	2075.5	2038.0
62.5°	8270.4	7289.6	4528.3	1612.8	1498.9	1785.0	2103.9	2118.9	2026.0	1913.7	1879.3
65°	8072.7	6883.8	3778.1	1220.4	1389.6	1713.1	2023.1	2030.5	1915.2	1771.5	1753.5
67.5°	7632.5	6241.4	2628.0	1072.2	1328.2	1657.7	1969.1	1936.2	1825.4	1674.1	1647.2
70°	6789.4	5085.3	1227.9	986.8	1235.4	1555.8	1837.4	1798.4	1677.1	1536.4	1512.4
72.5°	5443.2	3534.0	582.5	903.0	1138.1	1428.6	1675.6	1614.2	1513.9	1461.5	1448.0
75°	3562.4	1659.2	486.7	813.1	1009.3	1274.3	1536.4	1513.9	1421.1	1316.3	1265.3
77.5°	1445.0	437.3	440.2	721.8	906.0	1174.0	1388.1	1370.2	1247.4	1153.0	1132.1
80°	363.9	327.9	402.8	596.0	789.2	1022.8	1217.4	1166.5	1121.6	1019.8	986.8
82.5°	277.0	263.6	316.0	461.2	648.4	843.1	1039.2	1060.2	985.3	907.5	891.0
85°	193.2	239.6	191.7	327.9	480.7	664.9	871.5	909.0	858.0	769.7	709.8
87.5°	106.3	125.8	79.4	172.2	254.6	363.9	500.1	504.6	417.8	383.3	360.9
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)