

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: P591309

Luminaire Tested: **CTN-CA10-310-730-U-T4-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591309
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-CA10-310-730-U-T4-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (10) 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20917 lumens
Efficiency: N/A
Efficacy: 67.0 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

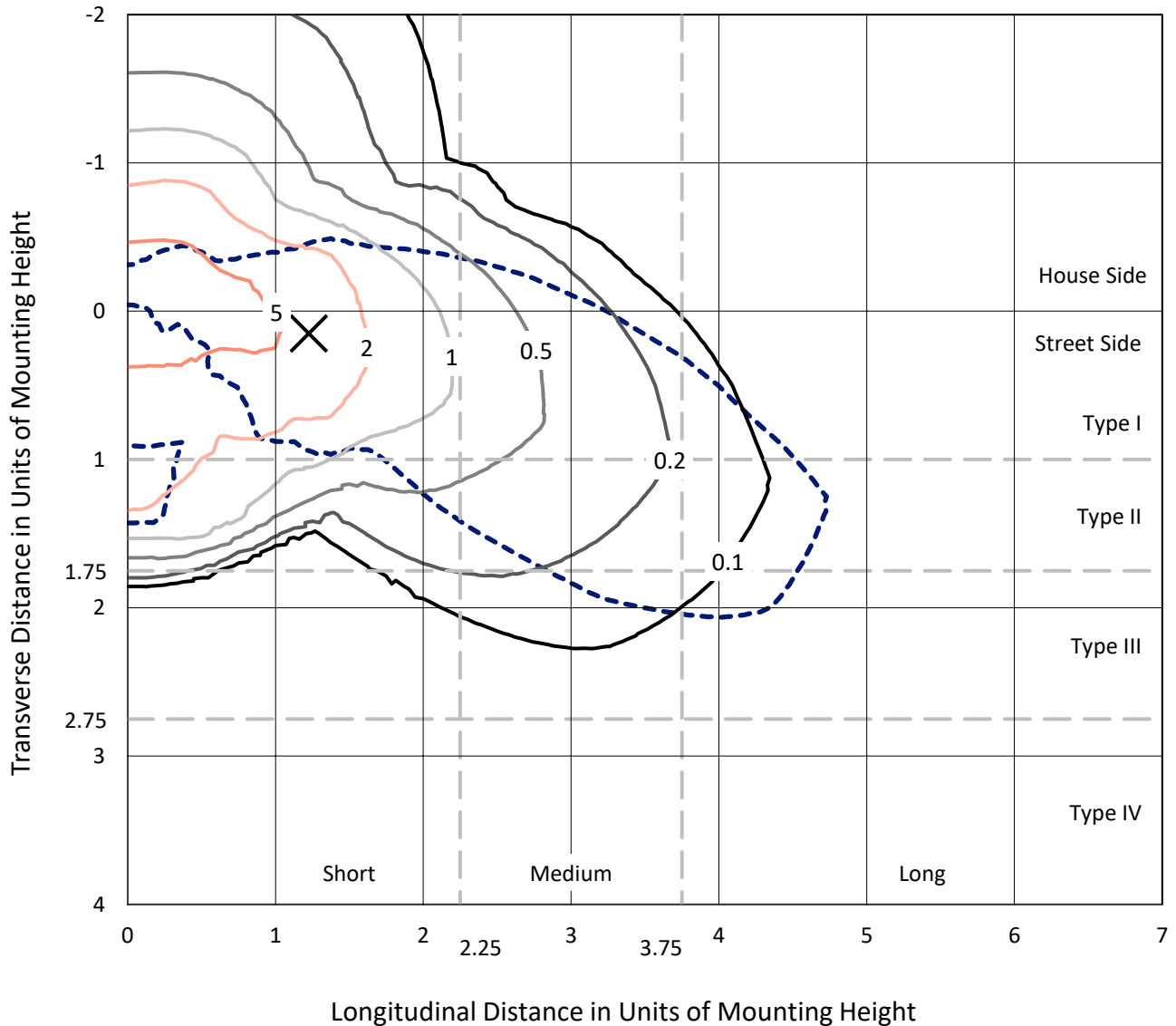
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

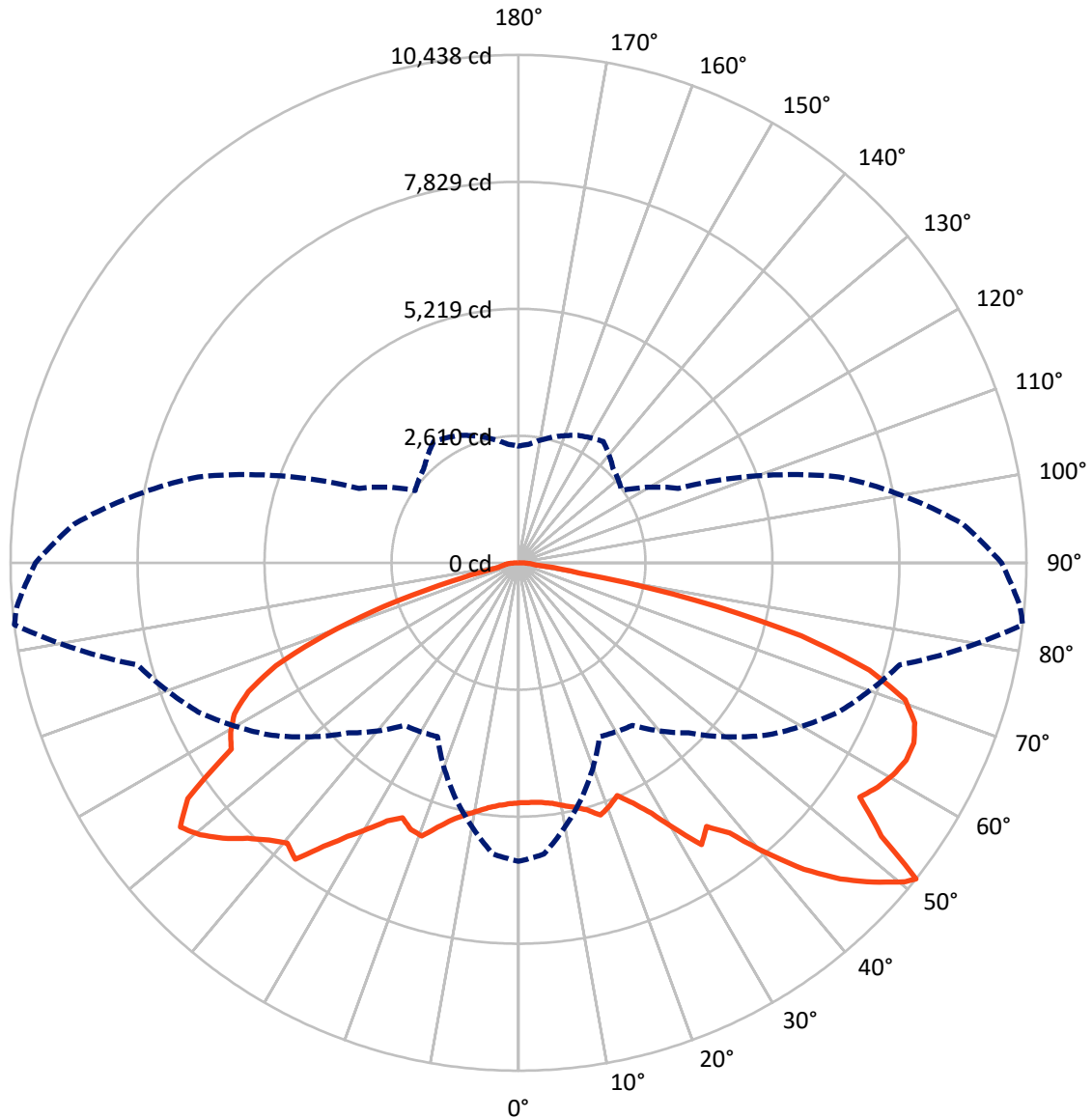
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.4 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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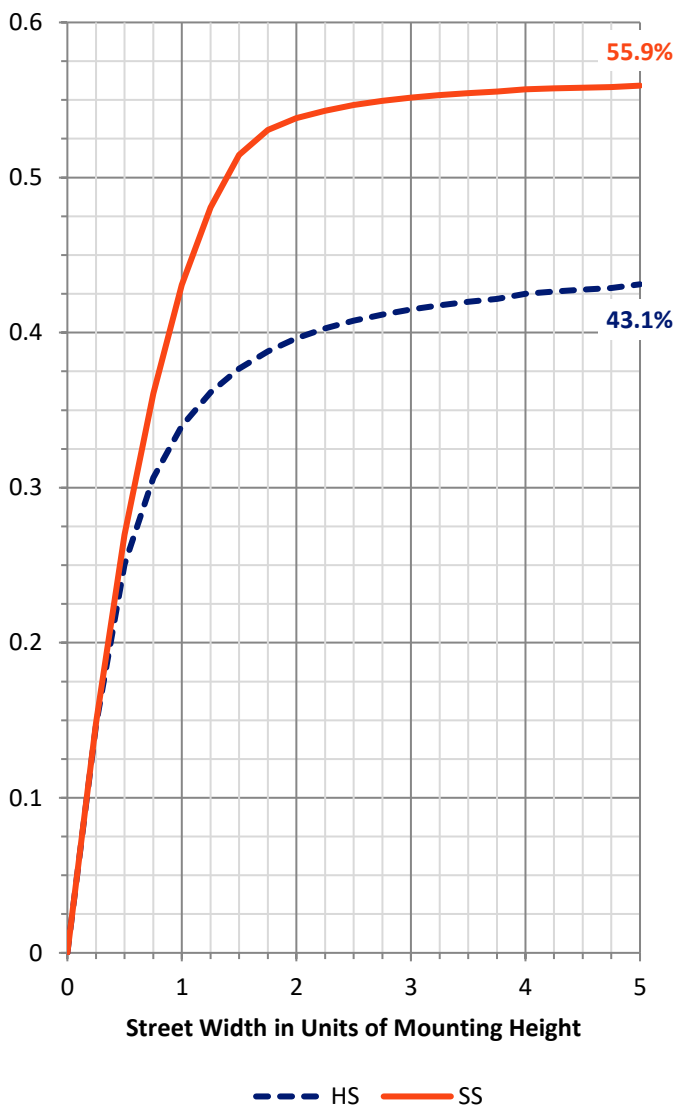
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9219.3	0.0	9219.3
	% Fixture	44.1	0.0	44.1
Street Side	Lumens	11697.7	0.0	11697.7
	% Fixture	55.9	0.0	55.9
Total	Lumens	20917.0	0.0	20917.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.6	2.3
10°-20°	1465.7	7.0
20°-30°	2276.9	10.9
30°-40°	3046.5	14.6
40°-50°	3952.5	18.9
50°-60°	4209.5	20.1
60°-70°	2932.4	14.0
70°-80°	2045.8	9.8
80°-90°	506.2	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°	20917.0	100.0
0°-180°	20917.0	100.0

Coefficient of Utilization



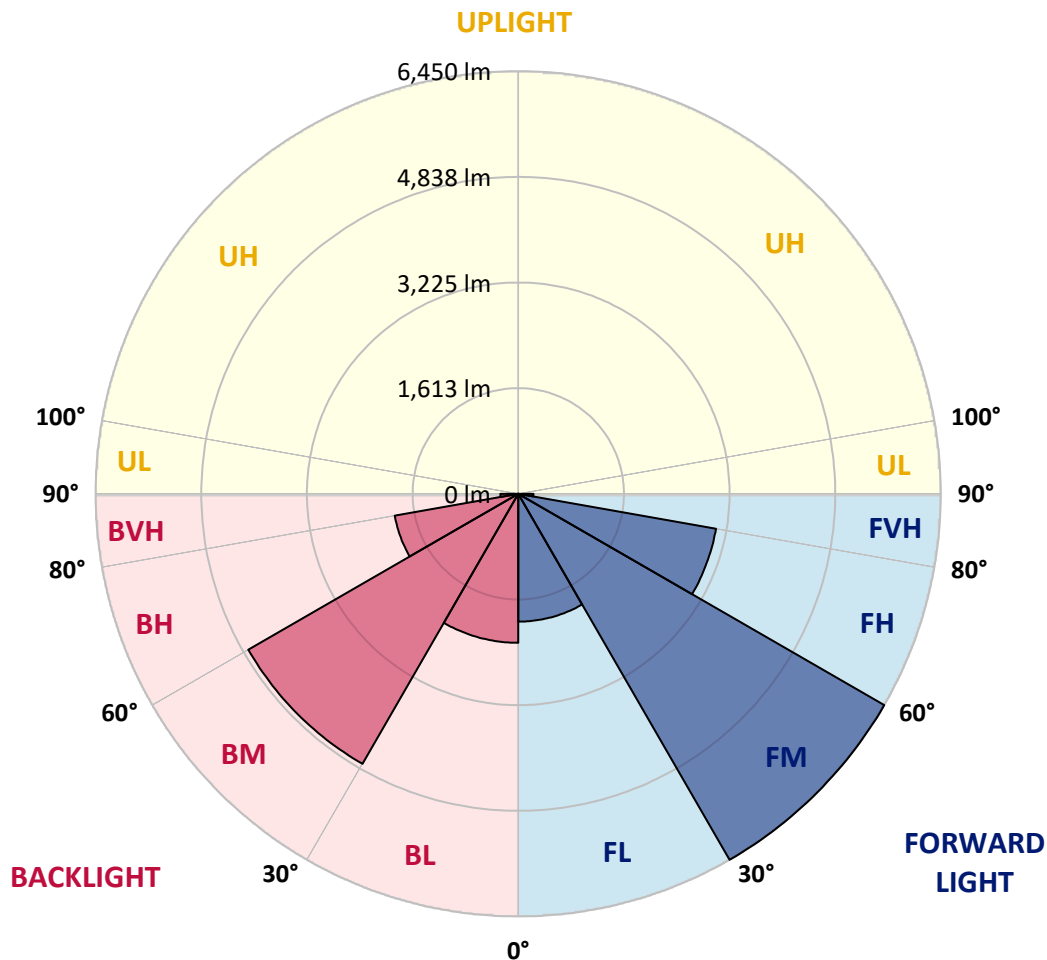
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1950.3	9.3			
FM (30°-60°)	6450.2	30.8			
FH (60°-80°)	3064.8	14.7			G2/5000
FVH (80°-90°)	232.4	1.1			G3/500
BL (0°-30°)	2273.9	10.9	B3/2500		
BM (30°-60°)	4758.3	22.7	B3/5000		
BH (60°-80°)	1913.4	9.1	B3/2500		G3/2500
BVH (80°-90°)	273.8	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°	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2
2.5°	4871.4	4837.6	4840.5	4886.1	4825.8	4865.5	4859.6	4930.2	4917.0	4931.7	4942.0
5°	4828.7	4802.3	4802.3	4862.6	4819.9	4862.6	4833.2	4894.9	4915.5	4947.8	4959.6
7.5°	4837.6	4809.6	4821.4	4874.3	4827.3	4871.4	4869.9	4928.7	4936.1	4993.4	5012.5
10°	4862.6	4831.7	4837.6	4880.2	4853.7	4930.2	4917.0	4997.8	4997.8	5074.3	5103.7
12.5°	4811.1	4790.5	4802.3	4859.6	4883.1	4962.5	4980.2	5062.5	5074.3	5156.6	5193.4
15°	4755.2	4725.8	4764.0	4846.4	4886.1	5000.8	5039.0	5165.5	5183.1	5268.4	5309.6
17.5°	4484.7	4465.6	4536.1	4602.3	4624.4	4736.1	4811.1	5021.4	5274.3	5452.2	5500.7
20°	3946.5	3943.6	3812.7	3784.8	4127.4	4536.1	4587.6	4767.0	5059.6	5337.5	5436.0
22.5°	3295.1	3383.4	3808.3	3943.6	3934.7	4096.5	4755.2	4924.3	5053.7	5194.9	5253.7
25°	3295.1	3287.8	3539.2	4121.5	4123.0	4192.1	4339.1	5186.0	5309.6	5471.3	5518.3
27.5°	3399.5	3406.9	3390.7	3815.6	4325.9	4390.6	4453.8	4892.0	5649.2	5828.6	5906.5
30°	3576.0	3587.7	3523.0	3524.5	4393.5	4587.6	4708.2	4880.2	5885.9	6346.2	6381.5
32.5°	3924.5	3920.0	3839.2	3734.8	3855.3	4780.2	4956.7	5180.2	5512.5	6904.9	6987.3
35°	4202.4	4183.2	4127.4	4055.3	3896.5	4725.8	5193.4	5502.2	5925.6	6656.4	7091.7
37.5°	4511.1	4483.2	4420.0	4331.8	4187.7	3298.1	5427.2	5869.8	6527.0	7046.1	7074.0
40°	4859.6	4828.7	4742.0	4612.6	4428.8	3378.9	5531.6	6324.1	7310.7	7832.7	7828.3
42.5°	5127.2	5096.3	5050.8	4914.0	3893.6	3727.4	4824.3	6962.3	8159.2	8612.0	8573.8
45°	5353.7	5327.2	5331.6	5187.5	3652.4	4155.3	5374.3	7296.0	8959.0	9267.8	9217.8
47.5°	5530.1	5488.9	5377.2	4364.1	3746.5	4450.9	5821.2	6363.8	9634.0	9808.9	9753.1
50°	5959.5	5890.4	5225.7	3874.5	3984.7	4812.6	6246.2	7019.6	8775.2	10301.5	10203.0
51°	6134.4	6009.5	5008.1	3942.1	4078.8	4943.4	6183.0	7257.8	8106.2	10438.3	10350.0
52.5°	6318.2	6071.2	4411.2	4045.0	4193.5	5124.3	5252.2	7623.9	8293.0	9341.3	9861.9
55°	5330.1	5427.2	4555.2	4421.4	4411.2	4428.8	5364.0	8169.5	8682.6	8506.2	8403.2
57.5°	3134.9	3192.2	4627.3	4950.8	3817.1	3517.2	5659.5	8581.2	9019.3	8701.7	8587.0
60°	1576.3	1649.8	1685.1	1536.6	2058.5	3208.4	4767.0	6219.7	9225.2	8848.8	8710.6
62.5°	69.1	114.7	45.6	50.0	83.8	1119.0	3502.5	6388.8	9398.7	8938.5	8756.1
65°	5.9	5.9	7.4	14.7	36.8	1174.8	3898.0	6622.6	9469.3	8929.6	8685.6
67.5°	1.5	1.5	2.9	10.3	26.5	1271.9	4362.6	6718.2	9472.2	8779.7	8481.2
70°	0.0	1.5	2.9	8.8	23.5	1330.7	4464.1	6699.1	9351.6	8426.8	8016.5
72.5°	0.0	0.0	1.5	7.4	20.6	1255.7	4346.5	6660.8	8939.9	7538.7	6956.4
75°	0.0	0.0	1.5	5.9	17.6	1277.8	4358.2	6231.5	7806.3	6002.1	5294.9
77.5°	0.0	0.0	1.5	5.9	16.2	1179.2	3990.6	5396.3	6169.7	3736.2	2962.8
80°	0.0	0.0	1.5	5.9	14.7	1011.6	3281.9	4212.6	3452.5	1267.5	817.5
82.5°	0.0	0.0	1.5	5.9	11.8	685.2	2180.6	2105.6	695.5	363.2	326.4
85°	0.0	0.0	1.5	4.4	8.8	408.8	1092.5	286.7	269.1	230.9	208.8
87.5°	0.0	0.0	1.5	2.9	5.9	173.5	336.7	88.2	111.7	94.1	83.8
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°	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2	4930.2
2.5°	4950.8	4950.8	4967.0	5021.4	5015.5	5059.6	5034.6	5089.0	5093.4	5083.1	5108.1
5°	4969.9	4987.5	5041.9	5099.3	5075.8	5140.5	5171.3	5243.4	5240.4	5231.6	5261.0
7.5°	5024.3	5061.1	5115.5	5184.6	5209.6	5262.5	5265.4	5364.0	5358.1	5353.7	5383.1
10°	5115.5	5164.0	5224.3	5328.7	5314.0	5390.4	5358.1	5430.1	5428.7	5425.7	5455.1
12.5°	5209.6	5280.1	5353.7	5455.1	5453.7	5456.6	5428.7	5465.4	5458.1	5437.5	5459.5
15°	5341.9	5436.0	5537.5	5611.0	5546.3	5533.1	5471.3	5449.2	5406.6	5347.8	5365.4
17.5°	5561.0	5653.6	5783.0	5822.7	5716.9	5656.6	5488.9	5366.9	5234.6	5144.9	5164.0
20°	5758.0	5930.1	6053.6	6050.6	5915.4	5756.6	5496.3	5290.4	5034.6	4861.1	4846.4
22.5°	5512.5	5802.1	6340.3	6277.1	6040.3	5815.4	5487.5	5168.4	4743.5	4474.4	4464.1
25°	5653.6	5659.5	6141.8	6403.5	6096.2	5790.4	5381.6	4955.2	4411.2	4131.8	4115.6
27.5°	6013.9	5981.5	5847.7	6268.2	6044.7	5662.4	5168.4	4592.0	4108.3	3865.6	3853.9
30°	6441.8	6341.8	6027.1	5612.5	5833.0	5414.0	4840.5	4220.0	3834.8	3614.2	3596.6
32.5°	6953.4	6743.2	6190.3	5540.4	5139.0	5039.0	4417.0	3925.9	3608.3	3378.9	3333.4
35°	7560.7	7246.1	6347.6	5418.4	4597.9	4483.2	4018.6	3661.3	3395.1	3162.8	3117.2
37.5°	7559.2	7887.1	6580.0	5250.7	4262.6	3859.8	3728.9	3484.8	3246.6	2965.8	2914.3
40°	7615.1	7625.4	6835.8	5087.5	3949.5	3539.2	3556.9	3398.1	3152.5	2843.7	2790.8
42.5°	8294.4	7794.5	7149.0	4868.4	3653.9	3302.5	3483.3	3367.2	3102.5	2786.4	2727.6
45°	8885.5	8309.1	6462.3	4628.8	3343.7	3118.7	3424.5	3295.1	3031.9	2717.3	2651.1
47.5°	9400.2	8717.9	6637.3	4209.7	3040.8	2968.7	3311.3	3156.9	2905.5	2612.9	2554.1
50°	9791.3	9056.1	6790.2	3646.6	2746.7	2818.7	3127.5	2970.2	2727.6	2490.8	2440.8
51°	9925.1	9164.9	6821.1	3621.6	2590.8	2748.1	3040.8	2887.8	2670.2	2443.8	2398.2
52.5°	10069.2	9306.1	6866.7	3677.4	2370.3	2632.0	2899.6	2765.8	2584.9	2390.8	2339.4
55°	8372.4	8744.4	6750.5	3559.8	2114.4	2401.1	2640.8	2580.5	2480.5	2308.5	2271.7
57.5°	8066.5	7399.0	5599.2	3014.3	1889.4	2126.2	2389.4	2429.1	2352.6	2177.6	2151.2
60°	8132.7	7331.3	4986.1	2248.2	1665.9	1880.6	2201.2	2236.5	2170.3	2038.0	2001.2
62.5°	8120.9	7157.8	4446.4	1583.6	1471.9	1752.7	2065.9	2080.6	1989.4	1879.2	1845.3
65°	7926.8	6759.4	3709.8	1198.4	1364.5	1682.1	1986.5	1993.8	1880.6	1739.5	1721.8
67.5°	7494.5	6128.6	2580.5	1052.8	1304.2	1627.7	1933.6	1901.2	1792.4	1643.9	1617.4
70°	6666.7	4993.4	1205.7	969.0	1213.1	1527.7	1804.2	1765.9	1646.8	1508.6	1485.1
72.5°	5344.8	3470.1	572.0	886.6	1117.5	1402.7	1645.4	1585.1	1486.6	1435.1	1421.9
75°	3498.0	1629.2	477.9	798.4	991.0	1251.3	1508.6	1486.6	1395.4	1292.5	1242.5
77.5°	1418.9	429.4	432.3	708.7	889.6	1152.8	1363.0	1345.4	1224.8	1132.2	1111.6
80°	357.3	322.0	395.5	585.2	774.9	1004.3	1195.4	1145.4	1101.3	1001.3	969.0
82.5°	272.0	258.8	310.3	452.9	636.7	827.8	1020.4	1041.0	967.5	891.1	874.9
85°	189.7	235.3	188.2	322.0	472.0	652.9	855.8	892.5	842.5	755.8	697.0
87.5°	104.4	123.5	77.9	169.1	250.0	357.3	491.1	495.5	410.2	376.4	354.4
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)