

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: P591408

Luminaire Tested: **CTN-CA10-630-740-U-T1-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591408  
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-CA10-630-740-U-T1-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: 58639 lumens  
Efficiency: N/A  
Efficacy: 92.9 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B5 - U0 - G5

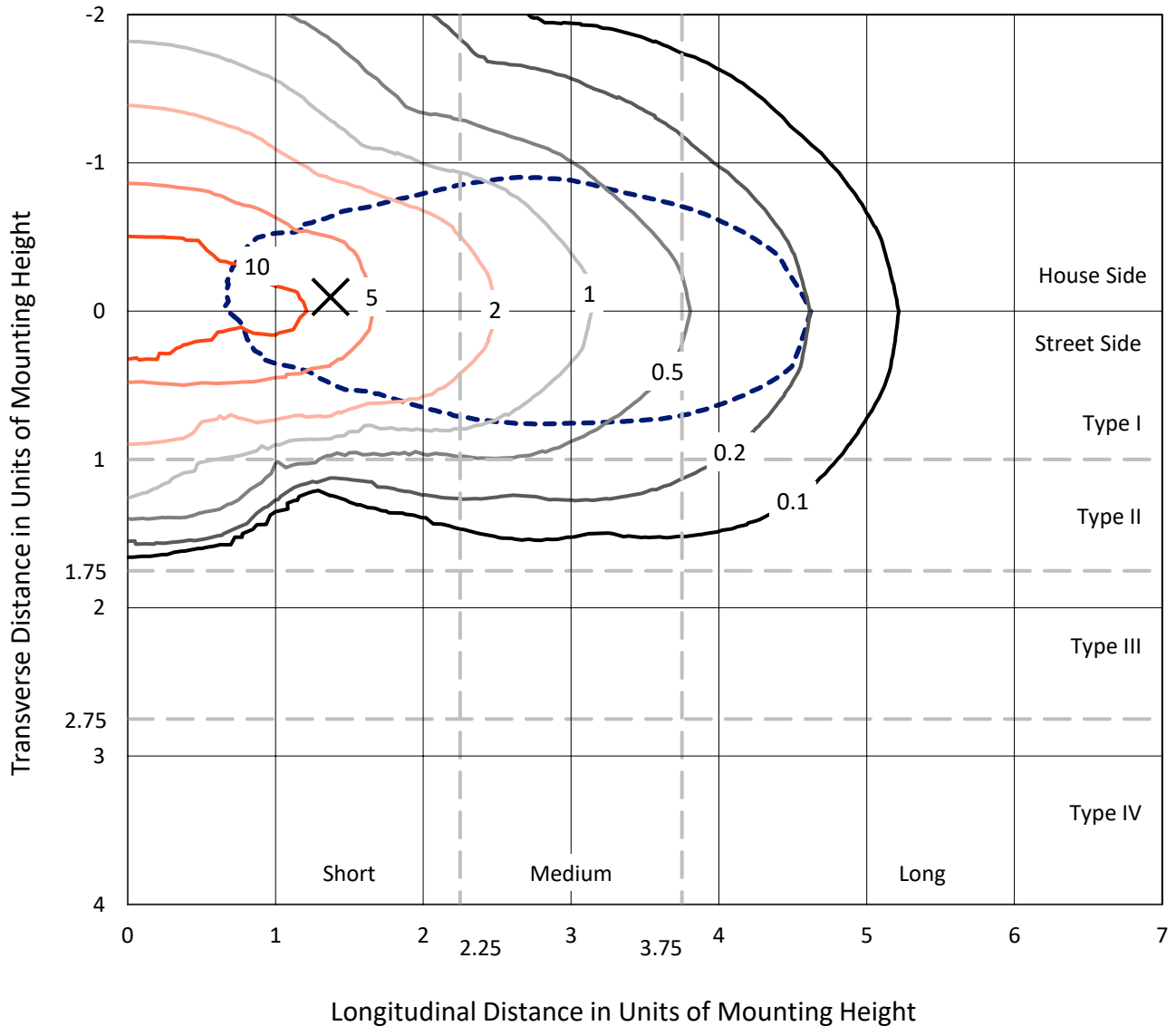
Input Watts (W): 631.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

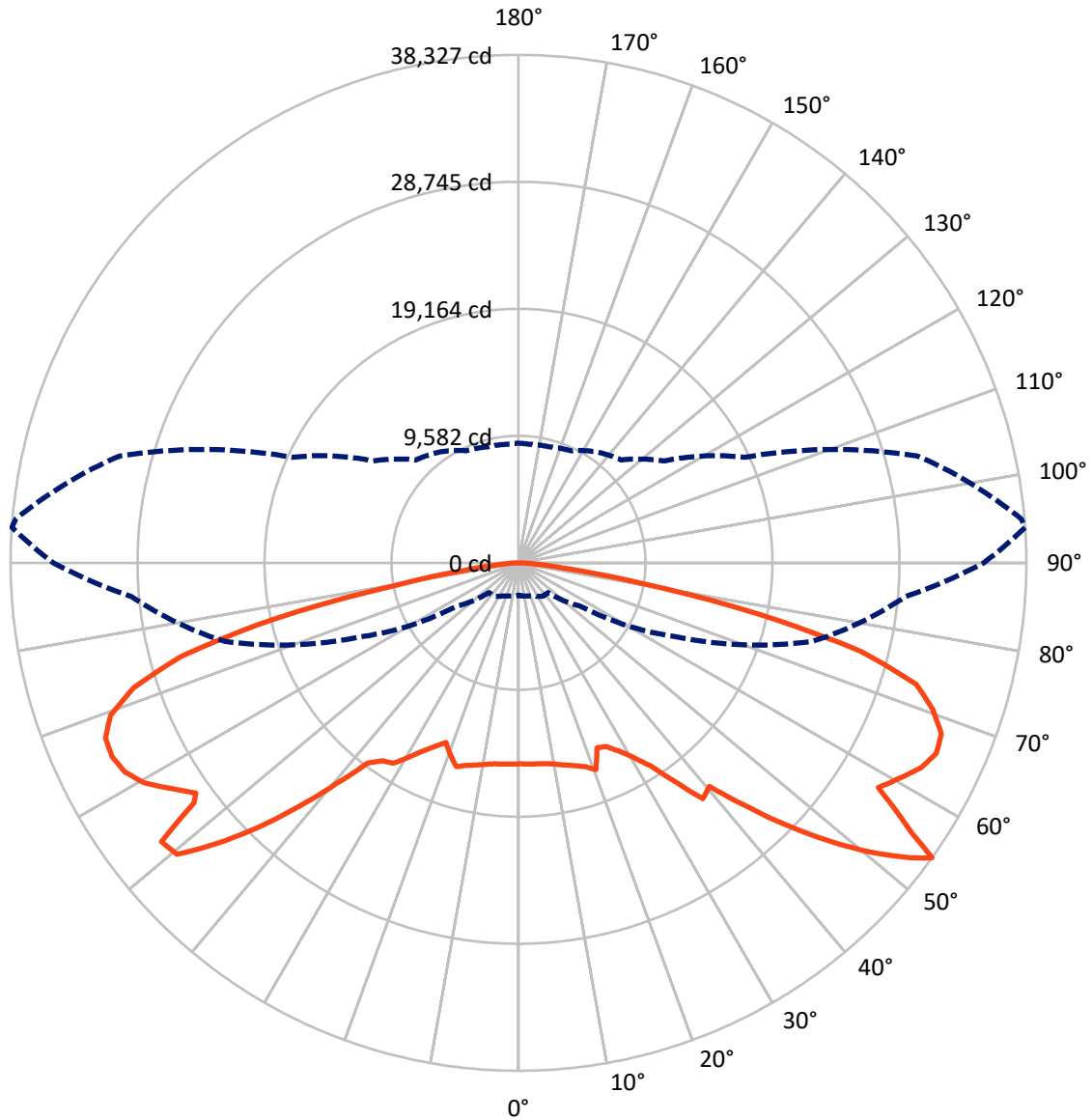
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 16.8 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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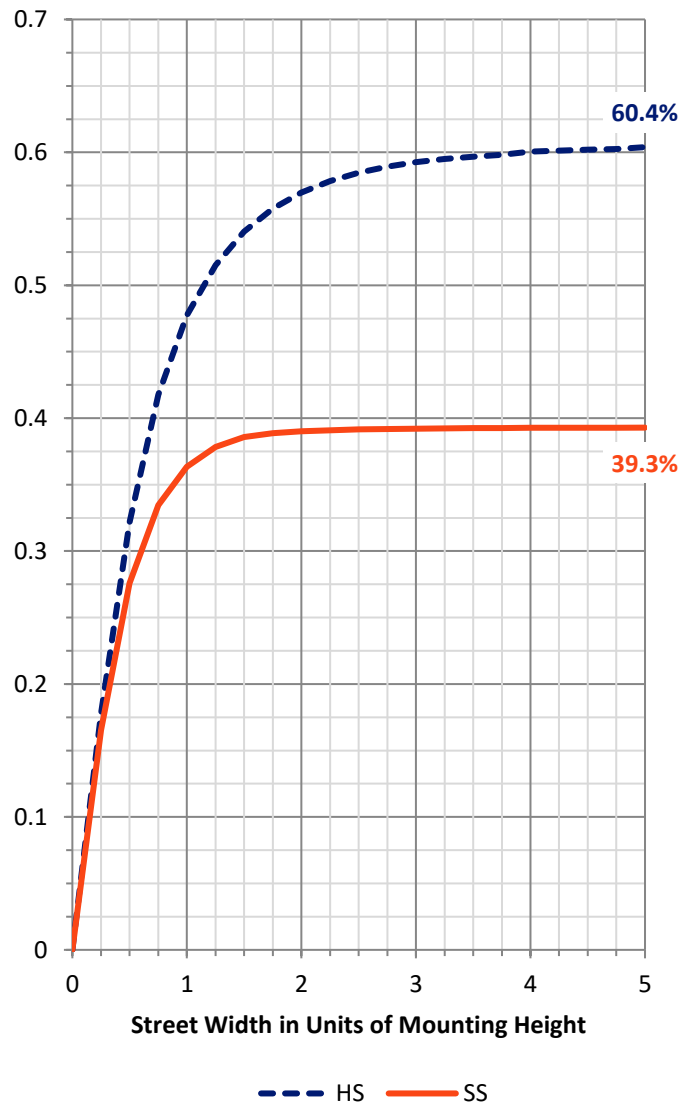
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	35716.0	0.0	35716.0
	% Fixture	60.9	0.0	60.9
<b>Street Side</b>	Lumens	22923.0	0.0	22923.0
	% Fixture	39.1	0.0	39.1
<b>Total</b>	Lumens	58639.0	0.0	58639.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1447.0	2.5
10°-20°	4140.3	7.1
20°-30°	5913.6	10.1
30°-40°	7824.4	13.3
40°-50°	10300.3	17.6
50°-60°	11364.1	19.4
60°-70°	10239.9	17.5
70°-80°	6476.0	11.0
80°-90°	933.2	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°	58639.0	100.0
0°-180°	58639.0	100.0

**Coefficient of Utilization**

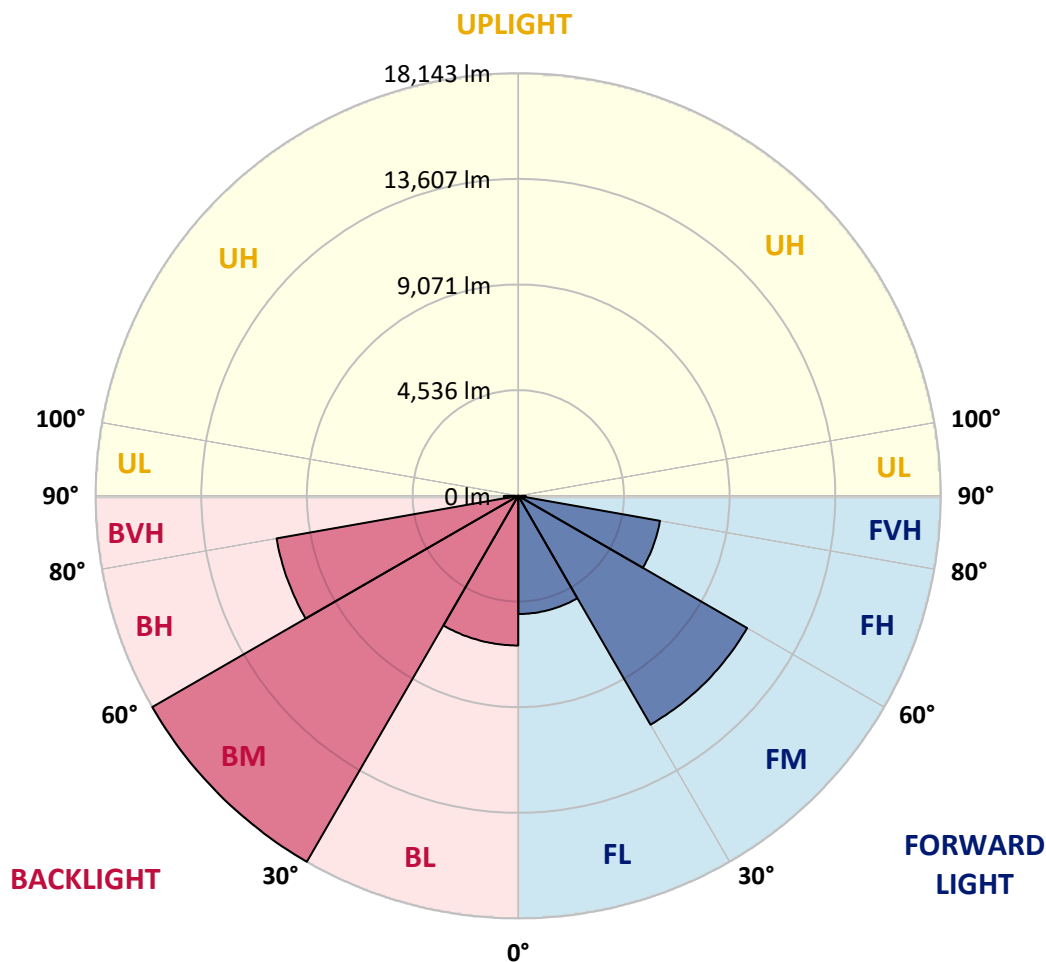


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	5074.7	8.7			
FM (30°-60°)	11346.1	19.3			
FH (60°-80°)	6179.0	10.5			G3/7500
FVH (80°-90°)	323.2	0.6			G3/500
BL (0°-30°)	6426.3	11.0	B5		
BM (30°-60°)	18142.7	30.9	B5		
BH (60°-80°)	10536.9	18.0	B5		G5
BVH (80°-90°)	610.1	1.0			G4/750
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**  
 Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5
2.5°	15191.1	15085.5	15099.8	15211.0	14974.3	15122.6	15054.2	15176.8	15128.3	15196.8	15248.1
5°	15057.0	14957.2	14982.9	15119.8	14931.6	15099.8	15002.9	15122.6	15139.7	15222.4	15270.9
7.5°	14945.8	14848.9	14866.0	14994.3	14874.5	15022.8	14965.8	15125.5	15128.3	15273.8	15310.8
10°	14834.6	14734.8	14757.6	14868.8	14791.8	14951.5	14988.6	15176.8	15219.6	15422.1	15424.9
12.5°	14597.9	14509.5	14520.9	14674.9	14677.8	14908.7	14982.9	15273.8	15362.2	15590.3	15613.1
15°	13665.4	13728.1	13967.7	14161.6	14341.3	14652.1	14905.9	15382.1	15501.9	15778.5	15844.1
17.5°	11406.8	11309.9	10788.0	11064.6	11928.7	12755.7	13194.9	14190.1	15305.1	16066.5	16152.1
20°	7999.0	8153.0	8971.5	9347.9	9963.9	11461.0	12835.5	13408.7	13770.9	15148.3	16223.4
22.5°	6345.1	6390.7	7562.7	8968.6	9430.6	10075.1	11706.3	13619.8	14187.3	14586.5	14763.3
25°	5905.9	5940.1	6128.3	7967.7	9228.1	9912.5	10628.3	13117.9	14677.8	15174.0	15385.0
27.5°	5538.0	5575.1	5760.5	6379.3	9042.8	9912.5	10725.3	11874.5	15154.0	15906.8	16086.5
30°	5264.3	5264.3	5455.3	5982.9	7579.8	9943.9	10927.8	12014.3	14412.5	16830.8	16990.5
32.5°	5013.3	5016.2	5224.3	5731.9	6567.5	9809.9	11212.9	12527.6	13836.5	17754.8	18168.2
35°	4788.0	4796.6	4984.8	5498.1	6310.8	7907.8	11529.5	13186.3	14943.0	17652.1	19959.1
37.5°	4597.0	4602.7	4765.2	5267.1	6094.1	5729.1	11734.8	13979.1	16428.7	18567.5	20332.7
40°	4460.1	4451.5	4568.4	5024.7	5777.6	5235.7	9932.5	14803.2	18193.9	21433.5	22089.4
42.5°	4323.2	4308.9	4425.9	4770.9	3952.5	5098.9	9202.5	15607.4	20227.2	24581.7	25166.3
45°	4163.5	4169.2	4283.3	4280.4	3741.4	4916.3	9282.3	13745.2	22403.0	27801.3	28545.6
47.5°	4077.9	4052.3	4109.3	3108.4	3567.5	4665.4	9248.1	12761.4	24322.2	30878.3	31616.9
50°	3918.3	3912.5	2880.2	2945.8	3393.5	4377.4	8712.0	13115.0	21946.8	33730.0	34477.2
52.5°	3678.7	3248.1	2672.1	2831.7	3219.6	4038.0	6222.4	13260.5	21886.9	33447.7	37143.5
54°	2443.9	2503.8	2586.5	2751.9	3094.1	3174.0	5692.0	13249.0	22927.8	29301.3	35104.6
55°	1400.2	1962.0	2518.1	2686.3	3005.7	2221.5	5486.7	13189.2	23592.2	29481.0	31645.4
57.5°	1212.0	1217.7	1385.9	2241.4	1542.8	1904.9	4904.9	12701.5	24835.5	31132.1	31750.9
60°	105.5	102.7	116.9	159.7	202.5	444.9	2469.6	8147.3	23965.8	32549.4	33510.5
62.5°	42.8	45.6	57.0	77.0	122.6	199.6	2041.8	7220.5	24333.6	33413.5	34465.8
65°	8.6	8.6	14.3	25.7	45.6	119.8	1739.5	6430.6	24145.4	33695.8	35101.7
67.5°	0.0	0.0	8.6	20.0	37.1	97.0	1505.7	5917.3	23070.3	33598.9	34865.0
70°	0.0	0.0	8.6	20.0	34.2	94.1	1289.0	5461.0	20404.0	32583.6	33986.7
72.5°	0.0	0.0	8.6	17.1	31.4	85.6	1103.6	4822.2	17295.6	30139.7	32050.4
75°	0.0	0.0	8.6	17.1	28.5	77.0	929.7	4137.8	14449.6	25976.2	28271.9
77.5°	0.0	0.0	8.6	17.1	25.7	68.4	730.0	3305.1	11347.0	18835.5	20067.5
80°	0.0	0.0	8.6	17.1	22.8	54.2	539.0	2087.5	6293.7	9553.2	10060.8
82.5°	0.0	0.0	5.7	14.3	20.0	34.2	256.7	789.9	2965.8	4374.5	4243.3
85°	0.0	0.0	5.7	14.3	17.1	25.7	111.2	199.6	986.7	1451.5	1351.7
87.5°	0.0	0.0	5.7	11.4	14.3	17.1	28.5	34.2	313.7	419.2	433.5
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°	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5	15162.5
2.5°	15213.9	15213.9	15211.0	15285.2	15191.1	15199.6	15111.2	15339.4	15313.7	15242.4	15327.9
5°	15231.0	15245.2	15242.4	15279.5	15205.3	15250.9	15128.3	15353.6	15316.5	15259.5	15347.9
7.5°	15302.3	15327.9	15308.0	15373.6	15225.3	15270.9	15145.4	15342.2	15305.1	15222.4	15316.5
10°	15456.3	15481.9	15442.0	15473.4	15316.5	15293.7	15139.7	15345.1	15265.2	15202.5	15319.4
12.5°	15655.9	15687.3	15607.4	15601.7	15402.1	15356.5	15134.0	15273.8	15156.8	15105.5	15211.0
15°	15878.3	15915.4	15821.3	15801.3	15581.7	15430.6	15111.2	15142.6	14974.3	14905.9	15017.1
17.5°	16169.2	16203.4	16132.1	16120.7	15835.5	15578.9	15079.8	14977.2	14740.5	14683.5	14743.3
20°	16656.8	16679.7	16585.5	16500.0	16080.8	15658.7	15028.5	14760.5	14398.3	14278.5	14347.0
22.5°	15159.7	15342.2	17193.0	16873.6	16263.3	15741.4	14900.2	14452.5	13944.9	13719.6	13765.2
25°	15356.5	15373.6	16075.1	17315.6	16462.9	15795.6	14749.0	14070.3	13371.7	13043.7	13100.8
27.5°	16069.4	16049.4	15772.8	17364.1	16699.6	15827.0	14560.8	13668.2	12804.2	12410.6	12424.9
30°	16993.3	16962.0	16542.8	15698.7	17039.0	15838.4	14395.4	13206.3	12299.4	11880.2	11868.8
32.5°	18256.7	18168.2	17518.1	16351.7	15604.6	15915.4	14161.6	12767.1	11817.5	11404.0	11372.6
35°	20195.8	20033.3	18849.8	17181.6	15356.5	15915.4	13842.2	12293.7	11372.6	10979.1	10956.3
37.5°	22599.8	22642.6	20552.3	18111.2	15738.6	14424.0	13460.1	11851.7	10987.6	10639.7	10639.7
40°	22169.2	22736.7	22528.5	19063.7	16132.1	14184.4	13049.4	11426.8	10668.2	10403.0	10437.3
42.5°	25012.4	24792.8	24821.3	20019.0	16408.7	13939.2	12604.6	11033.3	10385.9	10160.6	10186.3
45°	28166.3	27918.2	22722.4	20874.5	16537.1	13574.1	12154.0	10628.3	10075.1	9886.9	9955.3
47.5°	31280.4	31058.0	24952.5	20666.3	16417.3	13015.2	11597.9	10277.6	9747.1	9613.1	9715.8
50°	34294.7	33981.0	27356.5	18473.4	15992.4	12242.4	11030.4	9909.7	9462.0	9382.1	9459.1
52.5°	36983.8	36567.5	29791.8	18804.2	13970.5	11461.0	10525.7	9556.1	9202.5	9114.1	9191.1
54°	38327.0	38073.2	31152.1	18841.3	13391.6	10976.2	10223.4	9330.8	9057.0	8982.9	9025.7
55°	36039.9	36547.5	31959.1	18809.9	12972.4	10682.5	10023.8	9182.5	8954.4	8874.5	8917.3
57.5°	32004.7	31457.2	29880.2	18424.9	11831.7	9946.8	9439.2	8806.1	8649.2	8546.6	8606.5
60°	33020.0	32920.1	27276.6	17577.9	10585.6	9122.6	8863.1	8366.9	8261.4	8175.9	8255.7
62.5°	34080.8	34015.2	27693.0	16263.3	9345.1	8312.7	8201.5	7853.6	7790.9	7753.8	7773.8
65°	34654.0	34234.8	27681.6	14503.8	8207.2	7482.9	7465.8	7206.3	7234.8	7217.7	7300.4
67.5°	34411.6	33963.9	26458.2	13234.8	7137.8	6536.1	6590.3	6481.9	6587.5	6618.8	6681.6
70°	33145.4	33290.9	23791.8	12011.4	6074.1	5503.8	5674.9	5660.6	5814.6	5934.4	6034.2
72.5°	31394.5	30835.5	19942.0	10209.1	4445.8	3915.4	4212.0	4411.6	4582.7	4725.3	4819.4
75°	26720.5	26064.6	14723.4	7959.1	3219.6	2700.6	2780.4	2868.8	2980.0	3308.0	3501.9
77.5°	18319.4	18045.6	10588.4	6002.9	2050.4	1628.3	1939.2	2116.0	2210.1	2195.8	2230.0
80°	9393.5	9345.1	6268.1	3590.3	1383.1	1192.0	1411.6	1428.7	1579.8	1696.8	1702.5
82.5°	3787.1	3975.3	2503.8	1967.7	961.0	901.1	995.2	1120.7	1249.0	1317.5	1334.6
85°	1340.3	1308.9	761.4	924.0	610.3	630.2	704.4	847.0	981.0	998.1	961.0
87.5°	359.3	373.6	162.5	339.4	333.7	365.0	404.9	462.0	558.9	587.5	558.9
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)