

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: P591217

Luminaire Tested: **CTN-CA10-630-727-U-T1-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591217  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-630-727-U-T1-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 66412 lumens  
Efficiency: N/A  
Efficacy: 105.2 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B5 - U0 - G5

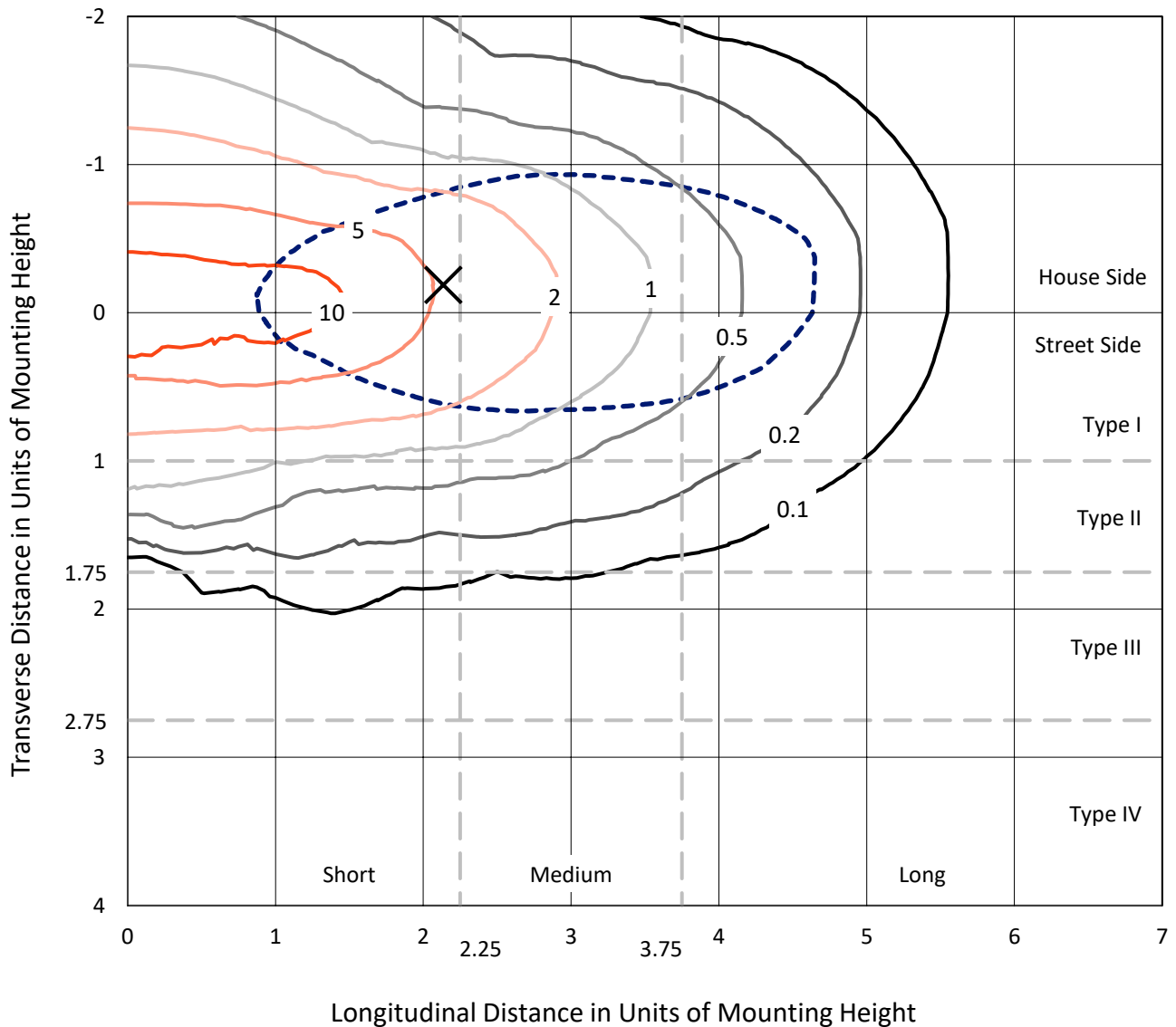
Input Watts (W): 631.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

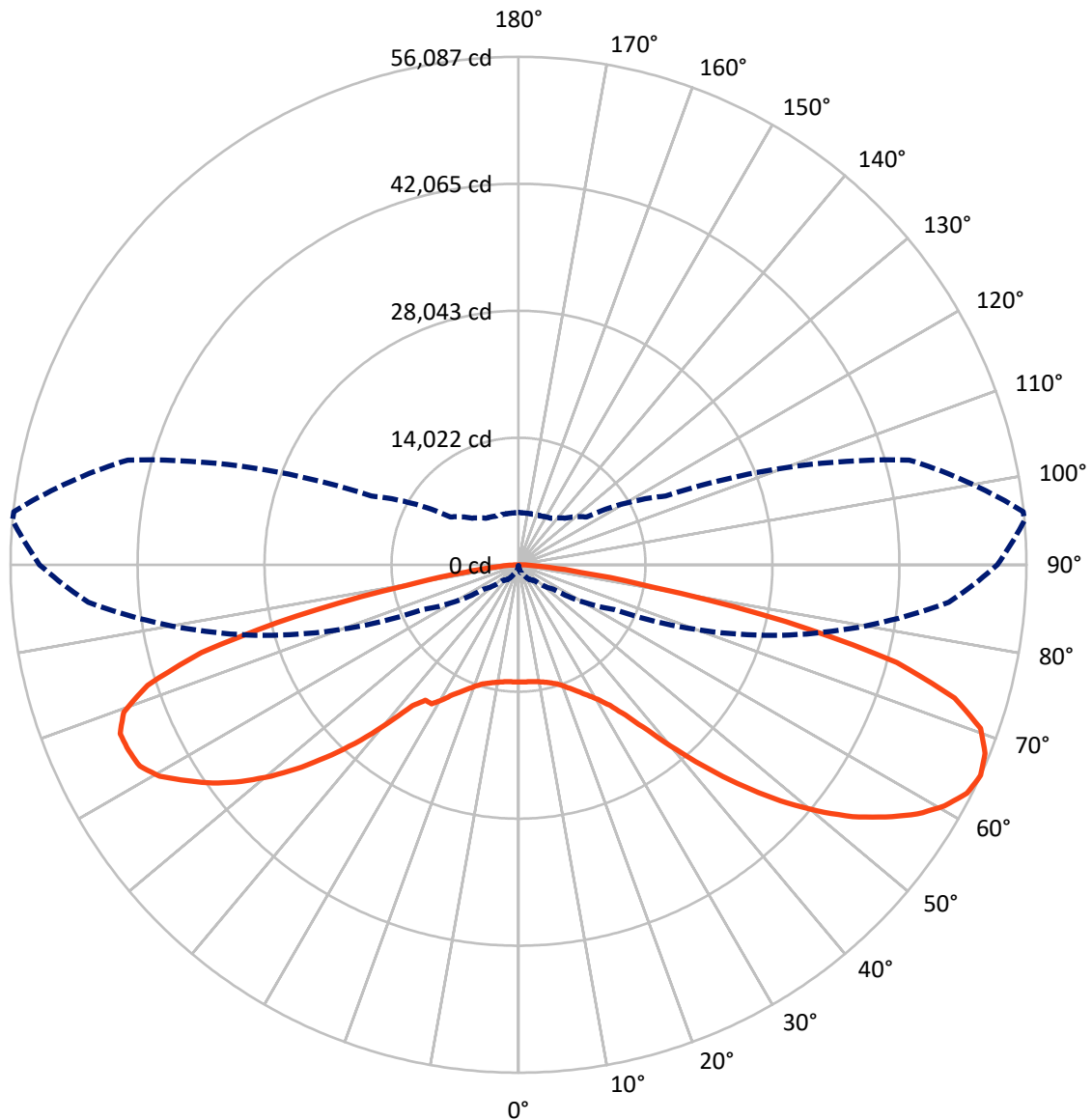
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 14.4 fc  
 Type I - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 95-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical



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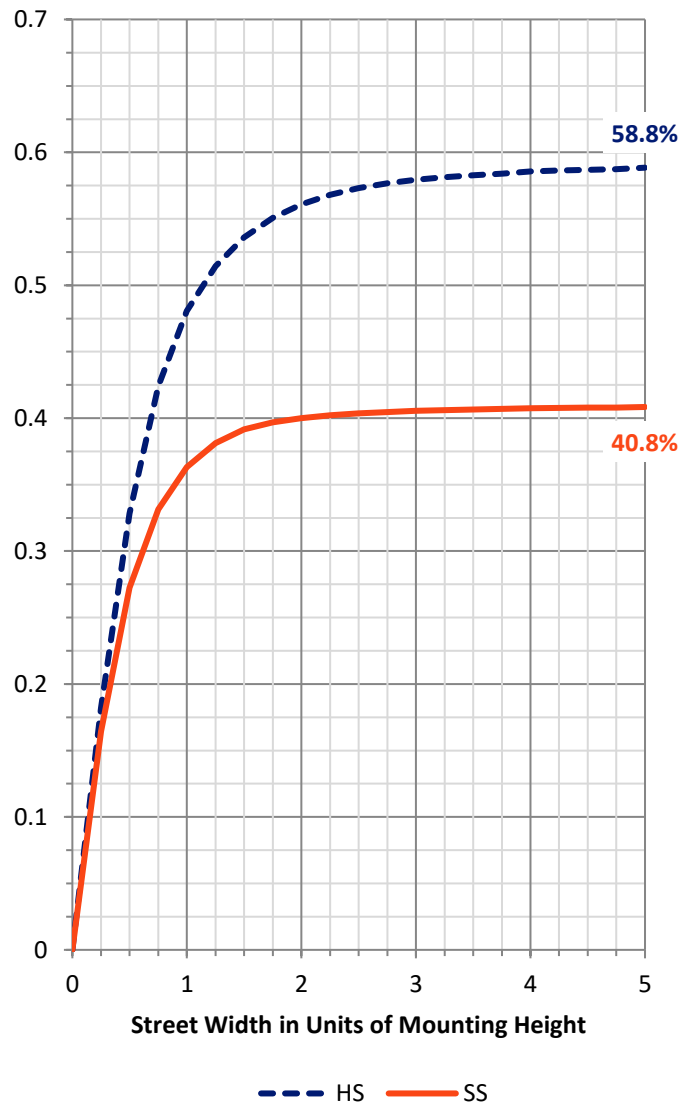
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	39378.4	0.0	39378.4
	% Fixture	59.3	0.0	59.3
<b>Street Side</b>	Lumens	27033.6	0.0	27033.6
	% Fixture	40.7	0.0	40.7
<b>Total</b>	Lumens	66412.0	0.0	66412.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1232.2	1.9
10°-20°	3548.3	5.3
20°-30°	5333.1	8.0
30°-40°	7435.7	11.2
40°-50°	10675.5	16.1
50°-60°	13608.5	20.5
60°-70°	14169.3	21.3
70°-80°	9124.3	13.7
80°-90°	1285.0	1.9
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°	66412.0	100.0
0°-180°	66412.0	100.0

**Coefficient of Utilization**

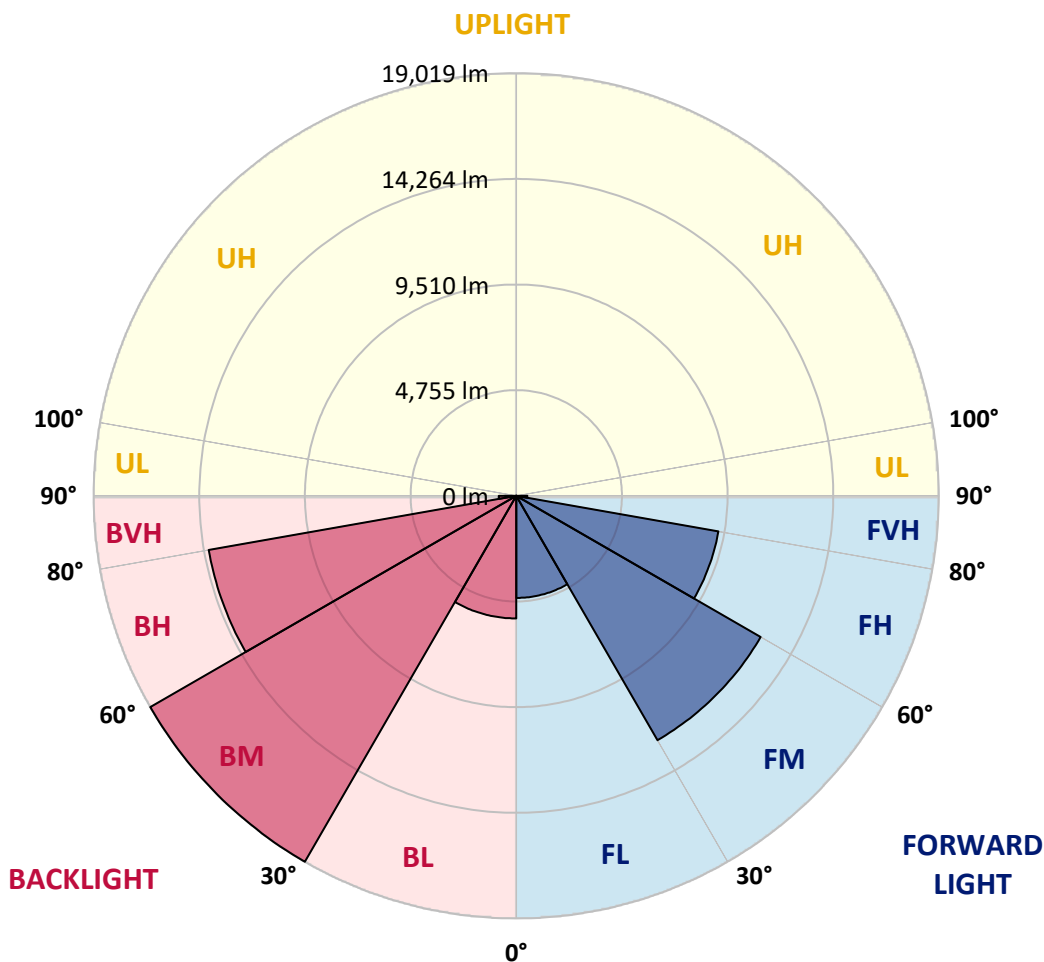


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4595.7	6.9			
FM	(30°-60°)	12700.4	19.1			
FH	(60°-80°)	9237.7	13.9			G4/12000
FVH	(80°-90°)	499.7	0.8			G3/500
BL	(0°-30°)	5517.9	8.3	B5		
BM	(30°-60°)	19019.3	28.6	B5		
BH	(60°-80°)	14055.9	21.2	B5		G5
BVH	(80°-90°)	785.3	1.2			G5
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°	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4
2.5°	12982.1	12875.8	12897.6	13001.4	12810.6	12914.5	12837.2	12962.8	12931.4	12941.0	13001.4
5°	12873.4	12764.7	12805.8	12933.8	12755.1	12880.6	12822.7	12926.5	12916.9	12953.1	12991.7
7.5°	12774.4	12658.5	12711.6	12805.8	12709.2	12817.9	12786.5	12916.9	12912.0	13018.3	13044.9
10°	12663.3	12557.1	12602.9	12718.9	12639.2	12769.6	12796.1	12950.7	13001.4	13146.3	13158.4
12.5°	12467.7	12363.9	12385.6	12532.9	12545.0	12743.0	12834.8	13078.7	13131.8	13298.4	13305.7
15°	11767.4	11743.3	11948.5	12185.2	12281.8	12576.4	12883.1	13216.3	13296.0	13506.1	13527.8
17.5°	9796.9	9555.4	9193.2	9480.6	10113.3	10927.1	12767.2	13421.6	13568.9	13779.0	13844.2
20°	6570.7	6790.5	7609.1	7976.1	8538.8	9910.4	12738.2	13643.7	13962.5	14216.0	14339.2
22.5°	5428.5	5416.4	6396.9	7633.2	8075.2	8705.4	11709.5	13906.9	14435.8	14766.6	14921.2
25°	5042.1	5047.0	5225.7	6788.1	7882.0	8548.5	10755.6	13561.6	14955.0	15428.3	15611.8
27.5°	4735.5	4754.8	4906.9	5435.8	7717.8	8514.7	10782.2	12574.0	15503.1	16135.8	16348.3
30°	4491.6	4481.9	4665.4	5107.3	6423.4	8526.7	10907.7	12772.0	14993.6	17140.4	17258.7
32.5°	4288.7	4262.2	4448.1	4892.4	5609.6	8432.5	11096.1	13327.4	14633.8	18106.3	18567.5
35°	4093.1	4083.5	4247.7	4684.7	5416.4	7003.0	11315.8	14015.6	15802.6	18137.7	20364.2
37.5°	3941.0	3933.7	4064.1	4477.1	5242.6	6380.0	11497.0	14882.5	17323.9	19477.9	21851.7
40°	3817.8	3798.5	3902.3	4293.5	5044.6	6276.1	10014.3	15788.1	19180.9	22605.1	25454.6
42.5°	3714.0	3687.4	3788.9	4112.4	4853.8	6160.2	9299.5	16700.9	21363.9	26087.3	28958.5
45°	3571.5	3569.1	3672.9	3974.8	4650.9	5991.2	9367.1	15177.1	23817.4	29419.7	32638.7
47.5°	3499.1	3482.2	3559.4	3846.8	4460.2	5735.2	9301.9	14525.1	25696.1	32764.3	36224.7
50°	3385.6	3371.1	3445.9	3699.5	4271.8	5411.6	9065.2	14926.0	24148.2	35932.5	39595.8
52.5°	3182.7	2620.1	3334.9	3576.3	4069.0	5061.5	8616.1	15148.2	24749.5	38868.9	42735.1
55°	1250.9	1678.3	3192.4	3421.8	3861.3	4733.0	7935.1	15085.4	26739.3	41498.7	45439.7
57.5°	1089.1	1093.9	2120.2	2856.7	3615.0	4390.1	7104.4	14728.0	28494.9	43749.3	48074.2
60°	154.5	157.0	1074.6	1202.6	2371.4	3119.9	6259.2	14088.1	29535.7	45999.9	50346.6
62.5°	103.8	108.7	978.0	1091.5	2163.7	2767.4	5474.4	12950.7	30037.9	47366.7	51983.8
65°	74.9	77.3	886.2	987.7	1927.0	2455.9	4745.1	11714.3	30083.8	47683.0	52882.1
67.5°	70.0	72.4	816.2	910.4	1753.2	2180.6	4114.9	10625.2	28816.0	47777.2	52845.9
70°	72.4	72.4	743.8	823.5	1555.1	1890.8	3414.6	9541.0	25618.8	46545.6	51657.8
72.5°	72.4	74.9	649.6	724.4	1340.2	1601.0	2798.8	7756.4	20748.1	43058.6	48789.0
75°	72.4	74.9	511.9	598.9	1113.2	1284.7	2296.5	6254.4	15978.9	36338.2	42686.8
77.5°	74.9	74.9	376.7	458.8	859.7	965.9	1743.5	4805.5	11774.7	25189.0	29719.2
80°	74.9	79.7	265.6	338.1	635.1	697.9	1265.4	3066.8	6341.3	12774.4	14754.5
82.5°	77.3	79.7	198.0	253.6	439.5	502.3	772.7	1509.3	2931.6	5911.5	6696.3
85°	72.4	74.9	161.8	176.3	251.1	301.9	480.5	748.6	1031.1	2325.5	2417.2
87.5°	50.7	48.3	50.7	58.0	82.1	132.8	227.0	253.6	248.7	625.4	726.9
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):**

	95°	96°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4	12943.4
2.5°	12965.2	12970.0	12950.7	13025.5	12950.7	12991.7	12883.1	13052.1	13035.2	12989.3	13047.3
5°	12962.8	12974.8	12970.0	13037.6	12943.4	12977.2	12868.6	13047.3	12986.9	12945.8	13015.9
7.5°	13020.7	13037.6	13030.4	13076.2	12967.6	12965.2	12858.9	12991.7	12933.8	12846.8	12933.8
10°	13148.7	13148.7	13127.0	13153.5	12996.6	12979.7	12801.0	12953.1	12854.1	12776.8	12883.1
12.5°	13312.9	13327.4	13271.8	13267.0	13049.7	12999.0	12774.4	12849.3	12706.8	12634.3	12738.2
15°	13554.4	13564.0	13491.6	13445.7	13180.1	13069.0	12706.8	12692.3	12494.3	12424.2	12499.1
17.5°	13834.5	13832.1	13730.7	13711.3	13399.8	13141.4	12651.2	12501.5	12248.0	12168.3	12233.5
20°	14283.7	14257.1	14146.0	14034.9	13580.9	13187.3	12571.6	12257.6	11905.1	11791.6	11844.7
22.5°	14887.4	14877.7	14703.8	14382.7	13774.1	13230.8	12436.3	11960.6	11492.1	11286.9	11320.7
25°	15549.0	15541.8	15293.1	14812.5	13943.2	13262.2	12279.4	11627.4	10994.7	10683.2	10675.9
27.5°	16316.9	16297.6	15962.0	15276.1	14177.4	13271.8	12110.3	11274.8	10502.1	10113.3	10130.2
30°	17251.5	17217.7	16758.8	15790.5	14474.4	13300.8	11965.4	10878.8	10043.2	9630.3	9620.6
32.5°	18490.3	18442.0	17729.6	16466.7	14858.4	13373.3	11791.6	10487.6	9615.8	9200.5	9164.2
35°	20376.2	20277.2	19098.8	17331.2	15285.8	13421.6	11513.9	10115.7	9202.9	8811.7	8782.7
37.5°	23167.8	23001.2	20823.0	18239.1	15710.8	13411.9	11197.5	9714.8	8867.2	8488.1	8480.8
40°	26848.0	26587.2	22892.5	19212.3	16118.9	13358.8	10857.0	9357.4	8587.1	8261.1	8285.2
42.5°	30873.5	30598.2	25345.9	20202.4	16425.6	13194.6	10492.4	9019.4	8328.7	8067.9	8070.3
45°	34930.4	34674.4	28168.9	21134.5	16577.7	12885.5	10113.3	8698.2	8055.8	7828.8	7855.4
47.5°	38970.4	38782.0	30965.2	21921.7	16502.9	12400.1	9656.9	8393.9	7785.4	7599.4	7659.8
50°	42727.8	42527.4	33945.1	22573.7	16126.2	11723.9	9188.4	8094.5	7565.6	7403.8	7454.5
52.5°	46210.0	45941.9	37137.5	22950.4	15447.6	11011.6	8775.5	7831.3	7353.1	7191.3	7244.5
55°	49168.1	49156.1	40059.4	22981.8	14387.5	10282.3	8377.0	7527.0	7145.5	7012.6	7024.7
57.5°	51937.9	52046.6	42573.3	22600.3	13131.8	9606.2	7920.6	7213.1	6906.4	6768.7	6780.8
60°	54053.3	54188.6	44278.1	21489.5	11794.0	8860.0	7430.4	6879.8	6609.4	6479.0	6517.6
62.5°	55572.2	55398.4	45181.3	19895.7	10453.8	8058.3	6899.1	6454.8	6239.9	6160.2	6162.6
65°	56086.6	56031.1	44652.4	17932.5	9188.4	7268.6	6271.3	5926.0	5793.2	5737.6	5778.7
67.5°	55560.2	55594.0	42592.6	16263.8	7985.8	6377.5	5566.2	5344.0	5276.4	5274.0	5317.4
70°	54118.5	53852.9	38320.8	14930.8	6858.1	5387.5	4807.9	4701.7	4679.9	4733.0	4769.3
72.5°	50351.4	49965.0	31779.0	12808.2	5264.3	3962.7	3641.5	3786.4	3781.6	3810.6	3844.4
75°	43135.9	42119.3	24892.0	10197.8	3899.9	2803.6	2429.3	2424.5	2417.2	2663.5	2752.9
77.5°	30233.5	29555.0	18376.8	7766.1	2593.5	1678.3	1666.2	1796.6	1818.4	1656.6	1688.0
80°	15167.5	15464.5	10605.9	4798.2	1724.2	1183.3	1241.2	1221.9	1238.8	1258.1	1270.2
82.5°	6990.9	7140.6	5076.0	2337.5	1110.8	898.3	850.0	924.9	958.7	956.3	949.0
85°	2480.0	2494.5	1605.9	1002.2	681.0	584.4	594.0	690.6	729.3	695.5	678.6
87.5°	719.6	683.4	328.4	297.0	313.9	311.5	321.2	340.5	367.1	362.2	335.7
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)