

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: P591289

Luminaire Tested: **CTN-CA10-210-730-U-T1-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591289  
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-CA10-210-730-U-T1-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D 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: 29128 lumens  
Efficiency: N/A  
Efficacy: 136.8 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B5 - U0 - G5

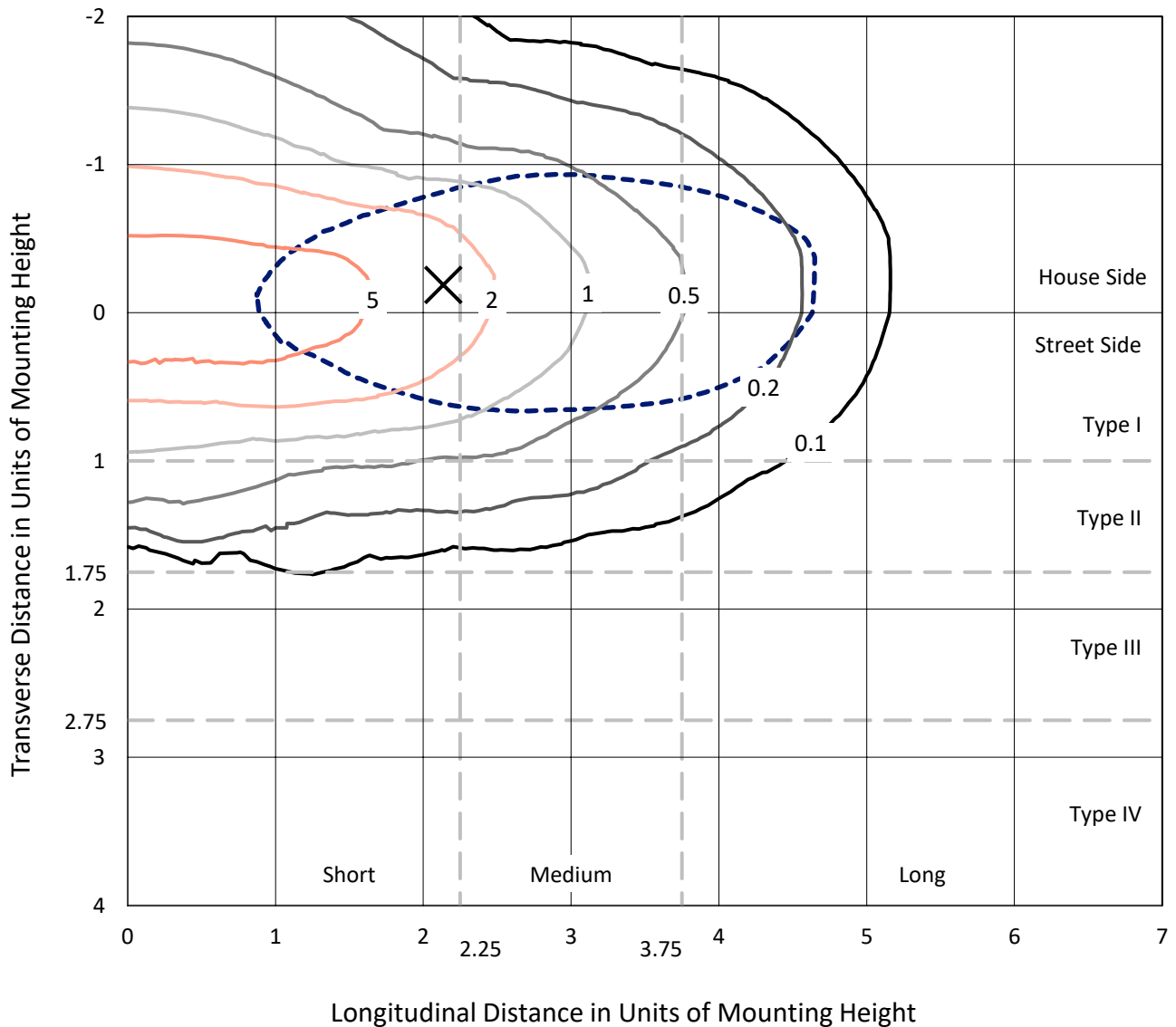
Input Watts (W): 212.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

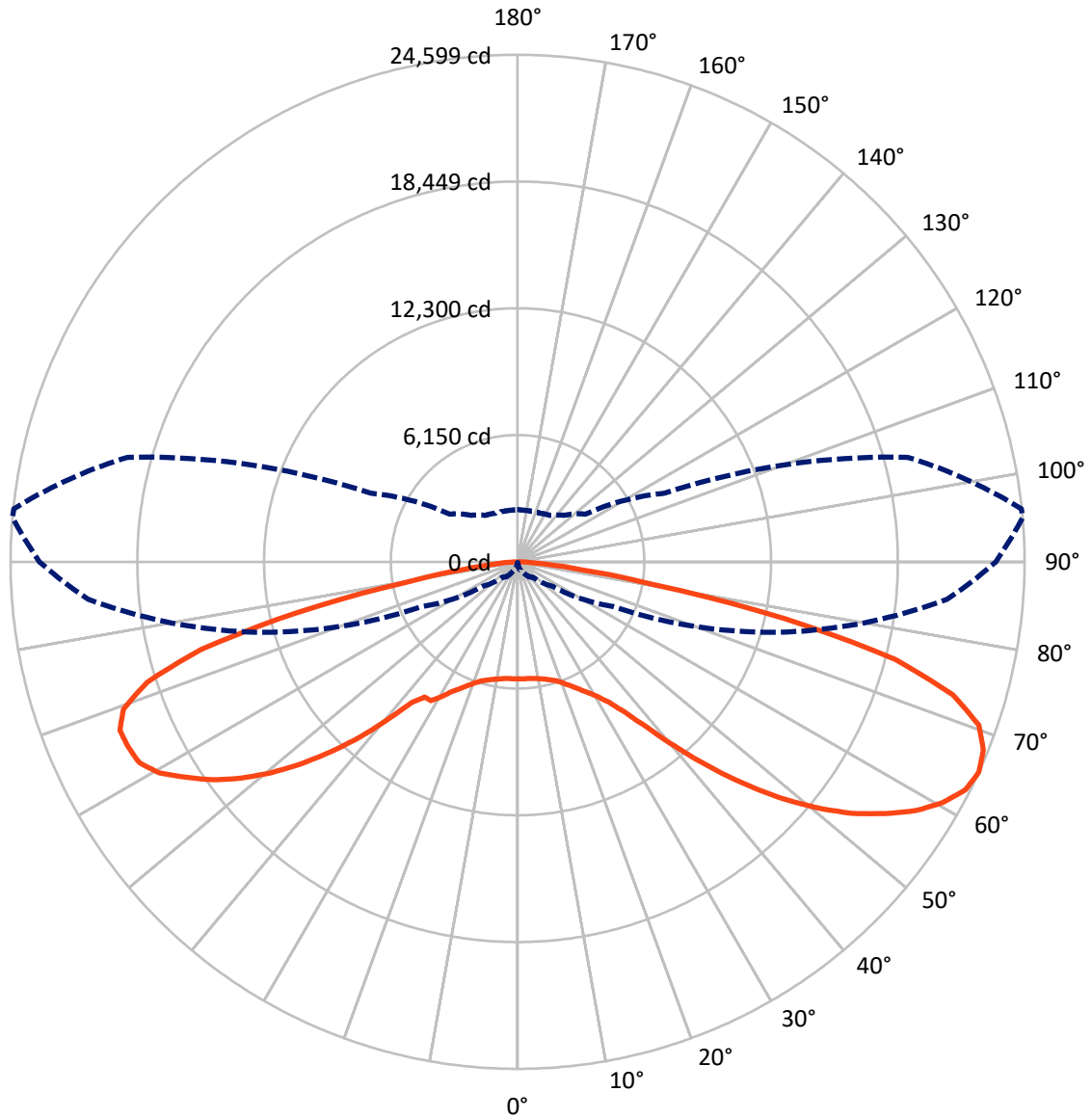
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.1 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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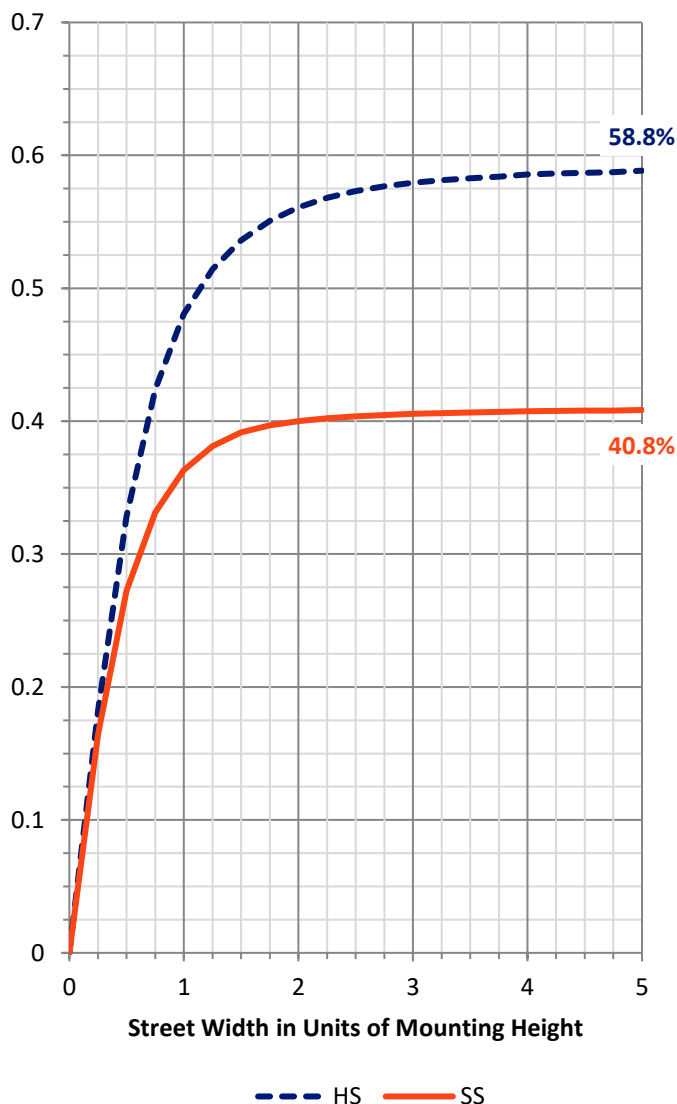
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	17271.2	0.0	17271.2
	% Fixture	59.3	0.0	59.3
<b>Street Side</b>	Lumens	11856.8	0.0	11856.8
	% Fixture	40.7	0.0	40.7
<b>Total</b>	Lumens	29128.0	0.0	29128.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	540.4	1.9
10°-20°	1556.3	5.3
20°-30°	2339.1	8.0
30°-40°	3261.3	11.2
40°-50°	4682.2	16.1
50°-60°	5968.6	20.5
60°-70°	6214.6	21.3
70°-80°	4001.9	13.7
80°-90°	563.6	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°	29128.0	100.0
0°-180°	29128.0	100.0

**Coefficient of Utilization**



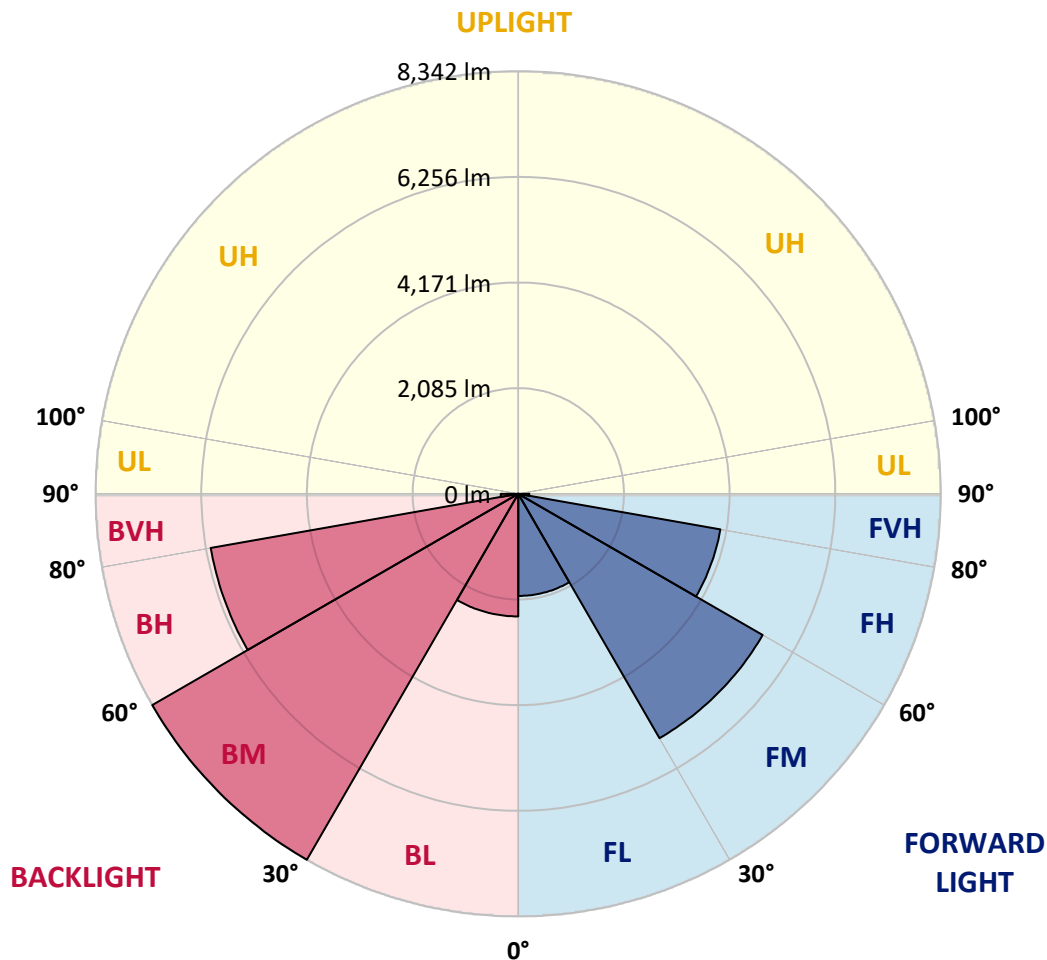
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2015.7	6.9			
FM (30°-60°)	5570.4	19.1			
FH (60°-80°)	4051.6	13.9			G2/5000
FVH (80°-90°)	219.2	0.8			G2/225
BL (0°-30°)	2420.1	8.3	B3/2500		
BM (30°-60°)	8341.8	28.6	B4/8500		
BH (60°-80°)	6164.8	21.2	B5		G5
BVH (80°-90°)	344.4	1.2			G3/500
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°	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9
2.5°	5693.9	5647.3	5656.8	5702.3	5618.7	5664.2	5630.3	5685.4	5671.6	5675.9	5702.3
5°	5646.2	5598.6	5616.6	5672.7	5594.3	5649.4	5624.0	5669.5	5665.3	5681.2	5698.1
7.5°	5602.8	5552.0	5575.3	5616.6	5574.2	5621.9	5608.1	5665.3	5663.2	5709.8	5721.4
10°	5554.1	5507.5	5527.6	5578.4	5543.5	5600.7	5612.3	5680.1	5702.3	5765.9	5771.2
12.5°	5468.3	5422.7	5432.3	5496.9	5502.2	5589.0	5629.3	5736.2	5759.5	5832.6	5835.8
15°	5161.1	5150.5	5240.6	5344.4	5386.7	5515.9	5650.5	5796.6	5831.6	5923.7	5933.2
17.5°	4296.9	4191.0	4032.1	4158.1	4435.6	4792.6	5599.6	5886.6	5951.2	6043.4	6072.0
20°	2881.9	2978.3	3337.3	3498.3	3745.1	4346.7	5586.9	5984.1	6123.9	6235.1	6289.1
22.5°	2380.9	2375.6	2805.6	3347.9	3541.7	3818.2	5135.7	6099.5	6331.5	6476.6	6544.4
25°	2211.5	2213.6	2292.0	2977.2	3457.0	3749.3	4717.4	5948.1	6559.2	6766.8	6847.3
27.5°	2077.0	2085.4	2152.1	2384.1	3385.0	3734.5	4729.0	5514.9	6799.6	7077.1	7170.3
30°	1970.0	1965.7	2046.2	2240.1	2817.3	3739.8	4784.1	5601.7	6576.1	7517.7	7569.6
32.5°	1881.0	1869.4	1950.9	2145.8	2460.4	3698.5	4866.7	5845.3	6418.3	7941.3	8143.6
35°	1795.2	1791.0	1863.0	2054.7	2375.6	3071.5	4963.1	6147.2	6930.9	7955.1	8931.6
37.5°	1728.5	1725.3	1782.5	1963.6	2299.4	2798.2	5042.5	6527.4	7598.2	8542.9	9584.1
40°	1674.5	1666.0	1711.6	1883.1	2212.5	2752.7	4392.2	6924.6	8412.7	9914.5	11164.3
42.5°	1628.9	1617.3	1661.8	1803.7	2128.8	2701.8	4078.7	7324.9	9370.1	11441.8	12701.1
45°	1566.5	1565.4	1610.9	1743.3	2039.9	2627.7	4108.4	6656.6	10446.2	12903.4	14315.2
47.5°	1534.7	1527.3	1561.2	1687.2	1956.2	2515.4	4079.8	6370.7	11270.2	14370.3	15888.0
50°	1484.9	1478.5	1511.4	1622.6	1873.6	2373.5	3976.0	6546.5	10591.3	15759.8	17366.5
52.5°	1395.9	1149.2	1462.7	1568.6	1784.6	2219.9	3779.0	6643.9	10855.0	17047.7	18743.4
55°	548.6	736.1	1400.2	1500.8	1693.5	2075.9	3480.3	6616.4	11727.7	18201.1	19929.6
57.5°	477.7	479.8	929.9	1252.9	1585.5	1925.5	3116.0	6459.6	12497.7	19188.2	21085.1
60°	67.8	68.8	471.3	527.4	1040.1	1368.4	2745.3	6179.0	12954.2	20175.3	22081.8
62.5°	45.5	47.7	428.9	478.7	949.0	1213.8	2401.0	5680.1	13174.5	20774.8	22799.9
65°	32.8	33.9	388.7	433.2	845.2	1077.1	2081.2	5137.8	13194.6	20913.6	23193.9
67.5°	30.7	31.8	358.0	399.3	768.9	956.4	1804.8	4660.2	12638.6	20954.9	23178.0
70°	31.8	31.8	326.2	361.2	682.1	829.3	1497.6	4184.6	11236.3	20414.7	22656.9
72.5°	31.8	32.8	284.9	317.7	587.8	702.2	1227.5	3401.9	9100.0	18885.3	21398.6
75°	31.8	32.8	224.5	262.7	488.3	563.5	1007.2	2743.1	7008.3	15937.8	18722.2
77.5°	32.8	32.8	165.2	201.2	377.0	423.7	764.7	2107.7	5164.3	11047.8	13034.7
80°	32.8	35.0	116.5	148.3	278.6	306.1	555.0	1345.1	2781.3	5602.8	6471.3
82.5°	33.9	35.0	86.8	111.2	192.8	220.3	338.9	662.0	1285.8	2592.7	2937.0
85°	31.8	32.8	71.0	77.3	110.1	132.4	210.8	328.3	452.2	1019.9	1060.2
87.5°	22.2	21.2	22.2	25.4	36.0	58.3	99.6	111.2	109.1	274.3	318.8
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):**

	95°	96°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9	5676.9
2.5°	5686.5	5688.6	5680.1	5712.9	5680.1	5698.1	5650.5	5724.6	5717.2	5697.1	5722.5
5°	5685.4	5690.7	5688.6	5718.2	5676.9	5691.8	5644.1	5722.5	5696.0	5678.0	5708.7
7.5°	5710.8	5718.2	5715.1	5735.2	5687.5	5686.5	5639.9	5698.1	5672.7	5634.6	5672.7
10°	5767.0	5767.0	5757.4	5769.1	5700.2	5692.8	5614.4	5681.2	5637.7	5603.9	5650.5
12.5°	5839.0	5845.3	5821.0	5818.9	5723.5	5701.3	5602.8	5635.6	5573.1	5541.4	5586.9
15°	5944.9	5949.1	5917.4	5897.2	5780.7	5732.0	5573.1	5566.8	5479.9	5449.2	5482.1
17.5°	6067.7	6066.7	6022.2	6013.7	5877.1	5763.8	5548.8	5483.1	5371.9	5337.0	5365.5
20°	6264.7	6253.1	6204.4	6155.7	5956.5	5783.9	5513.8	5376.1	5221.5	5171.7	5195.0
22.5°	6529.5	6525.3	6449.0	6308.2	6041.3	5803.0	5454.5	5245.9	5040.4	4950.4	4965.2
25°	6819.7	6816.6	6707.5	6496.7	6115.4	5816.7	5385.7	5099.7	4822.2	4685.6	4682.4
27.5°	7156.5	7148.1	7000.8	6700.0	6218.1	5821.0	5311.5	4945.1	4606.2	4435.6	4443.0
30°	7566.4	7551.6	7350.4	6925.6	6348.4	5833.7	5248.0	4771.4	4404.9	4223.8	4219.6
32.5°	8109.7	8088.6	7776.1	7222.2	6516.8	5865.5	5171.7	4599.8	4217.5	4035.3	4019.4
35°	8936.9	8893.5	8376.6	7601.4	6704.3	5886.6	5049.9	4436.7	4036.3	3864.8	3852.1
37.5°	10161.3	10088.2	9132.9	7999.6	6890.7	5882.4	4911.2	4260.9	3889.1	3722.8	3719.7
40°	11775.4	11661.0	10040.5	8426.4	7069.7	5859.1	4761.8	4104.1	3766.3	3623.3	3633.9
42.5°	13541.0	13420.2	11116.6	8860.7	7204.2	5787.1	4601.9	3955.8	3652.9	3538.5	3539.6
45°	15320.3	15208.0	12354.7	9269.5	7270.9	5651.5	4435.6	3815.0	3533.3	3433.7	3445.3
47.5°	17092.2	17009.6	13581.2	9614.8	7238.1	5438.6	4235.5	3681.5	3414.6	3333.1	3359.6
50°	18740.2	18652.3	14888.2	9900.7	7072.9	5142.1	4030.0	3550.2	3318.3	3247.3	3269.5
52.5°	20267.5	20149.9	16288.3	10066.0	6775.2	4829.6	3848.9	3434.8	3225.0	3154.1	3177.4
55°	21564.9	21559.6	17569.9	10079.7	6310.3	4509.8	3674.1	3301.3	3134.0	3075.7	3081.0
57.5°	22779.7	22827.4	18672.4	9912.4	5759.5	4213.2	3473.9	3163.6	3029.1	2968.7	2974.0
60°	23707.5	23766.9	19420.2	9425.2	5172.8	3885.9	3258.9	3017.5	2898.8	2841.6	2858.6
62.5°	24373.7	24297.5	19816.3	8726.2	4585.0	3534.3	3025.9	2831.1	2736.8	2701.8	2702.9
65°	24599.3	24575.0	19584.4	7865.1	4030.0	3188.0	2750.6	2599.1	2540.9	2516.5	2534.5
67.5°	24368.4	24383.3	18680.9	7133.2	3502.5	2797.2	2441.3	2343.9	2314.2	2313.1	2332.2
70°	23736.1	23619.6	16807.3	6548.6	3007.9	2362.9	2108.7	2062.1	2052.6	2075.9	2091.8
72.5°	22083.9	21914.4	13938.1	5617.6	2308.9	1738.0	1597.2	1660.7	1658.6	1671.3	1686.1
75°	18919.2	18473.3	10917.5	4472.7	1710.5	1229.6	1065.5	1063.4	1060.2	1168.2	1207.4
77.5°	13260.3	12962.7	8060.0	3406.2	1137.5	736.1	730.8	788.0	797.5	726.6	740.3
80°	6652.4	6782.7	4651.7	2104.5	756.2	519.0	544.4	535.9	543.3	551.8	557.1
82.5°	3066.2	3131.8	2226.3	1025.2	487.2	394.0	372.8	405.6	420.5	419.4	416.2
85°	1087.7	1094.1	704.3	439.5	298.7	256.3	260.5	302.9	319.9	305.0	297.6
87.5°	315.6	299.7	144.0	130.3	137.7	136.6	140.9	149.3	161.0	158.9	147.2
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)