

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: P591445

Luminaire Tested: **CTN-CA8-230-740-U-T1-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591445  
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-CA8-230-740-U-T1-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (8) 4000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 30468 lumens  
Efficiency: N/A  
Efficacy: 133.4 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B5 - U0 - G5

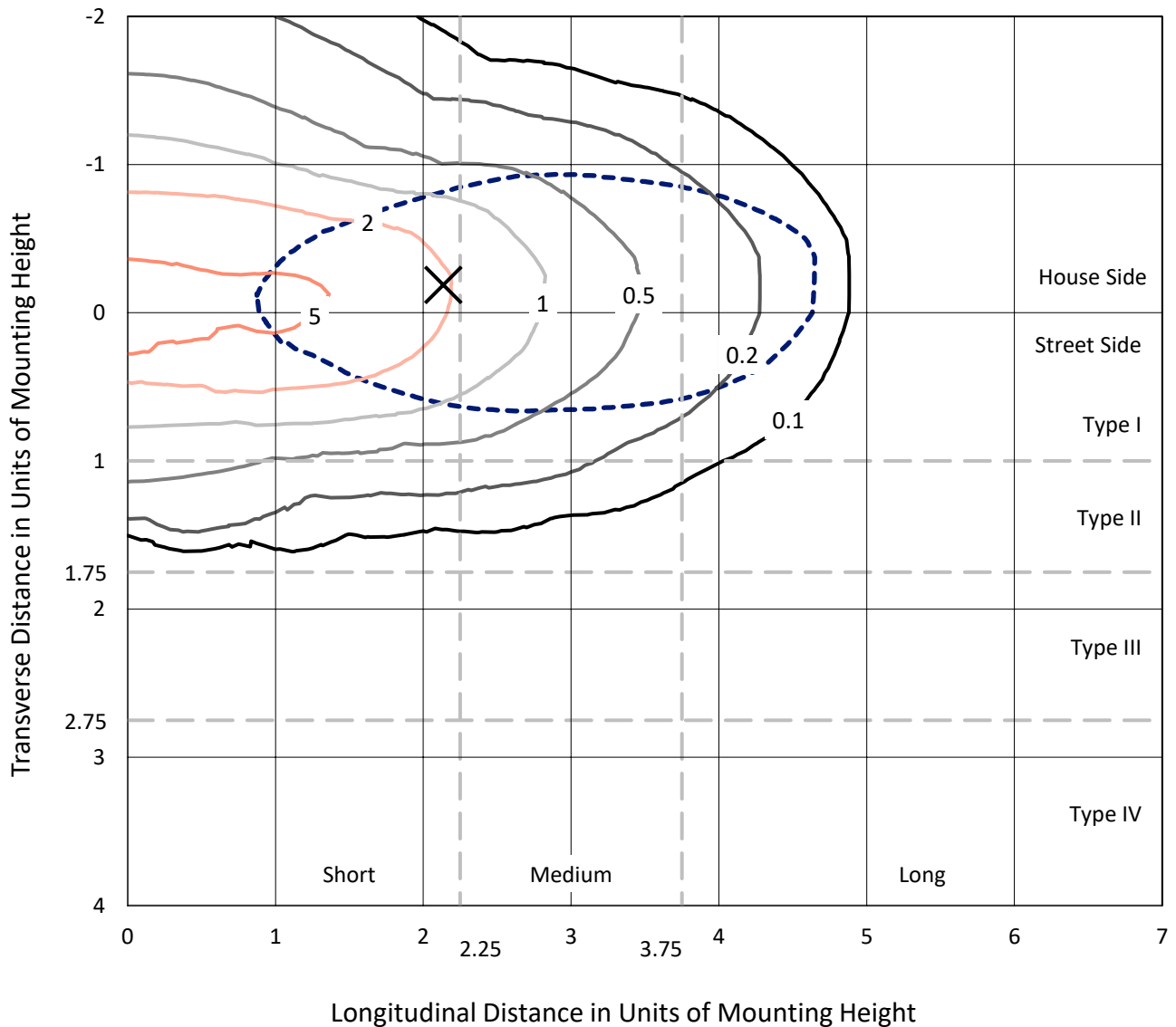
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

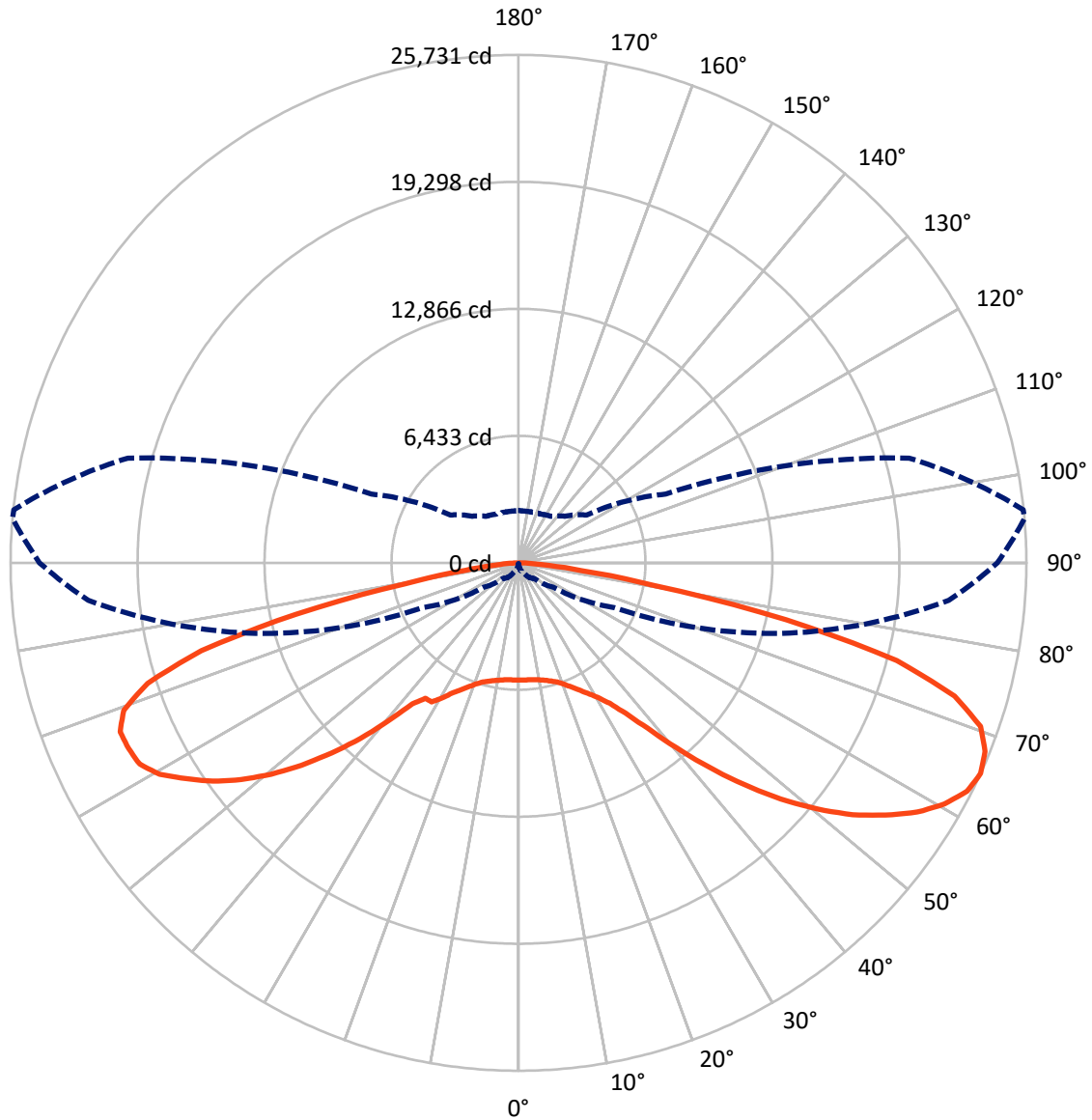
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.6 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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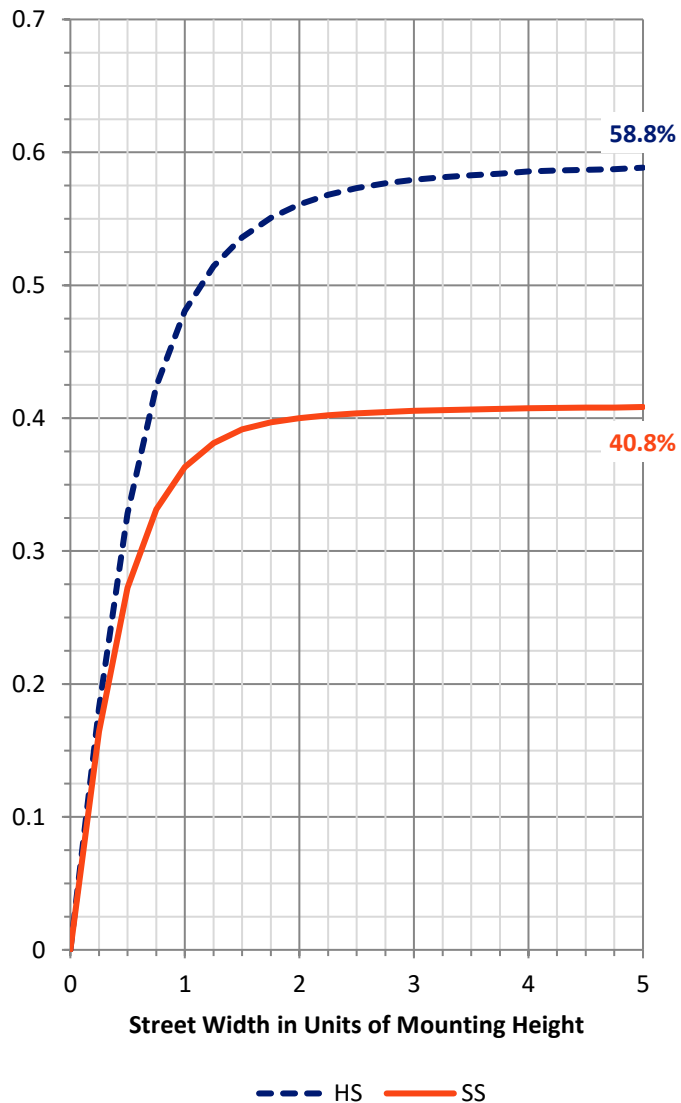
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	18065.7	0.0	18065.7
	% Fixture	59.3	0.0	59.3
<b>Street Side</b>	Lumens	12402.3	0.0	12402.3
	% Fixture	40.7	0.0	40.7
<b>Total</b>	Lumens	30468.0	0.0	30468.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	565.3	1.9
10°-20°	1627.9	5.3
20°-30°	2446.7	8.0
30°-40°	3411.3	11.2
40°-50°	4897.6	16.1
50°-60°	6243.2	20.5
60°-70°	6500.5	21.3
70°-80°	4186.0	13.7
80°-90°	589.5	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°	30468.0	100.0
0°-180°	30468.0	100.0

**Coefficient of Utilization**

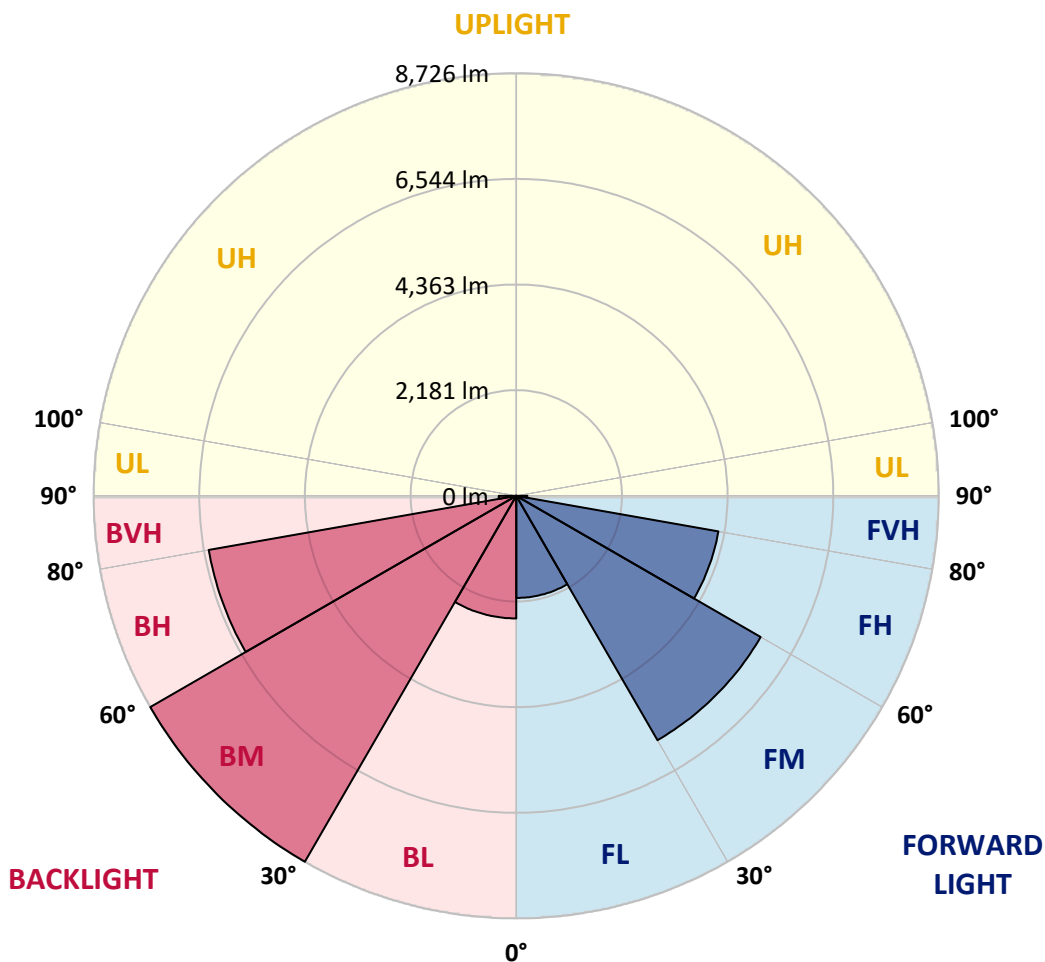


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2108.4	6.9			
FM (30°-60°)	5826.6	19.1			
FH (60°-80°)	4238.0	13.9			G2/5000
FVH (80°-90°)	229.2	0.8			G3/500
BL (0°-30°)	2531.5	8.3	B4/5000		
BM (30°-60°)	8725.5	28.6	B5		
BH (60°-80°)	6448.4	21.2	B5		G5
BVH (80°-90°)	360.3	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°	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1
2.5°	5955.8	5907.1	5917.0	5964.7	5877.2	5924.8	5889.3	5947.0	5932.6	5937.0	5964.7
5°	5906.0	5856.1	5874.9	5933.7	5851.7	5909.3	5882.7	5930.3	5925.9	5942.5	5960.2
7.5°	5860.5	5807.4	5831.7	5874.9	5830.6	5880.5	5866.1	5925.9	5923.7	5972.4	5984.6
10°	5809.6	5760.8	5781.9	5835.1	5798.5	5858.3	5870.5	5941.4	5964.7	6031.2	6036.7
12.5°	5719.8	5672.2	5682.2	5749.8	5755.3	5846.1	5888.2	6000.1	6024.5	6100.9	6104.3
15°	5398.6	5387.5	5481.7	5590.2	5634.5	5769.7	5910.4	6063.3	6099.8	6196.2	6206.2
17.5°	4494.6	4383.8	4217.6	4349.4	4639.7	5013.0	5857.2	6157.4	6225.0	6321.4	6351.3
20°	3014.5	3115.3	3490.8	3659.2	3917.4	4546.6	5843.9	6259.4	6405.6	6521.9	6578.4
22.5°	2490.5	2484.9	2934.7	3501.9	3704.7	3993.8	5372.0	6380.1	6622.7	6774.5	6845.4
25°	2313.2	2315.4	2397.4	3114.2	3616.0	3921.8	4934.4	6221.7	6860.9	7078.1	7162.3
27.5°	2172.5	2181.4	2251.2	2493.8	3540.7	3906.3	4946.6	5768.6	7112.4	7402.7	7500.2
30°	2060.6	2056.2	2140.4	2343.1	2946.9	3911.8	5004.2	5859.4	6878.7	7863.5	7917.8
32.5°	1967.5	1955.4	2040.7	2244.5	2573.5	3868.6	5090.6	6114.2	6713.6	8306.7	8518.3
35°	1877.8	1873.4	1948.7	2149.2	2484.9	3212.8	5191.4	6430.0	7249.8	8321.1	9342.5
37.5°	1808.0	1804.7	1864.5	2054.0	2405.1	2926.9	5274.5	6827.7	7947.7	8935.9	10025.0
40°	1751.5	1742.7	1790.3	1969.8	2314.3	2879.3	4594.3	7243.1	8799.7	10370.6	11677.9
42.5°	1703.9	1691.7	1738.2	1886.7	2226.8	2826.1	4266.3	7661.9	9801.2	11968.1	13285.4
45°	1638.5	1637.4	1685.0	1823.5	2133.7	2748.6	4297.4	6962.9	10926.8	13497.0	14973.7
47.5°	1605.3	1597.5	1633.0	1764.8	2046.2	2631.2	4267.4	6663.7	11788.7	15031.3	16618.9
50°	1553.2	1546.6	1580.9	1697.2	1959.8	2482.7	4158.9	6847.6	11078.5	16484.9	18165.5
52.5°	1460.2	1202.0	1529.9	1640.7	1866.7	2322.1	3952.8	6949.6	11354.4	17832.0	19605.7
55°	573.9	770.0	1464.6	1569.8	1771.5	2171.4	3640.4	6920.8	12267.3	19038.5	20846.5
57.5°	499.6	501.9	972.7	1310.6	1658.5	2014.1	3259.3	6756.8	13072.7	20071.0	22055.1
60°	70.9	72.0	493.0	551.7	1087.9	1431.3	2871.6	6463.2	13550.1	21103.5	23097.6
62.5°	47.6	49.9	448.7	500.7	992.6	1269.6	2511.5	5941.4	13780.6	21730.5	23848.7
65°	34.3	35.5	406.6	453.1	884.1	1126.7	2176.9	5374.2	13801.6	21875.7	24260.9
67.5°	32.1	33.2	374.5	417.7	804.3	1000.4	1887.8	4874.6	13220.0	21918.9	24244.3
70°	33.2	33.2	341.2	377.8	713.5	867.4	1566.5	4377.1	11753.2	21353.9	23699.2
72.5°	33.2	34.3	298.0	332.4	614.9	734.5	1284.0	3558.4	9518.7	19754.1	22383.1
75°	33.2	34.3	234.9	274.7	510.7	589.4	1053.6	2869.3	7330.7	16671.0	19583.5
77.5°	34.3	34.3	172.8	210.5	394.4	443.1	799.9	2204.6	5401.9	11556.0	13634.3
80°	34.3	36.6	121.9	155.1	291.4	320.2	580.5	1407.0	2909.2	5860.5	6769.0
82.5°	35.5	36.6	90.8	116.3	201.6	230.4	354.5	692.4	1344.9	2712.0	3072.1
85°	33.2	34.3	74.2	80.9	115.2	138.5	220.5	343.4	473.1	1066.9	1109.0
87.5°	23.3	22.2	23.3	26.6	37.7	60.9	104.1	116.3	114.1	286.9	333.5
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):**

	95°	96°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1	5938.1
2.5°	5948.1	5950.3	5941.4	5975.8	5941.4	5960.2	5910.4	5987.9	5980.2	5959.1	5985.7
5°	5947.0	5952.5	5950.3	5981.3	5938.1	5953.6	5903.7	5985.7	5958.0	5939.2	5971.3
7.5°	5973.5	5981.3	5978.0	5999.0	5949.2	5948.1	5899.3	5960.2	5933.7	5893.8	5933.7
10°	6032.3	6032.3	6022.3	6034.5	5962.5	5954.7	5872.7	5942.5	5897.1	5861.6	5910.4
12.5°	6107.6	6114.2	6088.8	6086.5	5986.8	5963.6	5860.5	5894.9	5829.5	5796.3	5843.9
15°	6218.4	6222.8	6189.6	6168.5	6046.7	5995.7	5829.5	5822.9	5732.0	5699.9	5734.2
17.5°	6346.9	6345.8	6299.3	6290.4	6147.5	6028.9	5804.0	5735.4	5619.0	5582.5	5612.4
20°	6552.9	6540.8	6489.8	6438.8	6230.6	6050.0	5767.5	5623.5	5461.7	5409.6	5434.0
22.5°	6829.9	6825.5	6745.7	6598.4	6319.2	6069.9	5705.4	5487.2	5272.3	5178.1	5193.6
25°	7133.5	7130.1	7016.0	6795.6	6396.7	6084.3	5633.4	5334.3	5044.1	4901.1	4897.8
27.5°	7485.8	7476.9	7322.9	7008.3	6504.2	6088.8	5555.9	5172.6	4818.1	4639.7	4647.4
30°	7914.5	7899.0	7688.5	7244.2	6640.5	6102.1	5489.4	4990.9	4607.6	4418.1	4413.7
32.5°	8482.8	8460.7	8133.9	7554.4	6816.6	6135.3	5409.6	4811.4	4411.5	4220.9	4204.3
35°	9348.1	9302.6	8762.0	7951.1	7012.7	6157.4	5282.2	4640.8	4222.0	4042.6	4029.3
37.5°	10628.7	10552.3	9553.0	8367.6	7207.7	6153.0	5137.1	4456.9	4068.0	3894.1	3890.8
40°	12317.1	12197.5	10502.4	8814.1	7394.9	6128.6	4980.9	4292.9	3939.5	3790.0	3801.0
42.5°	14163.9	14037.6	11628.0	9268.3	7535.6	6053.3	4813.6	4137.8	3821.0	3701.3	3702.4
45°	16025.1	15907.7	12923.1	9695.9	7605.4	5911.5	4639.7	3990.5	3695.8	3591.7	3603.8
47.5°	17878.5	17792.1	14206.0	10057.1	7571.1	5688.8	4430.3	3850.9	3571.7	3486.4	3514.1
50°	19602.3	19510.4	15573.1	10356.2	7398.2	5378.6	4215.4	3713.5	3470.9	3396.7	3419.9
52.5°	21199.9	21076.9	17037.7	10529.0	7086.9	5051.8	4025.9	3592.8	3373.4	3299.2	3323.6
55°	22557.0	22551.5	18378.2	10543.4	6600.6	4717.2	3843.1	3453.2	3278.1	3217.2	3222.7
57.5°	23827.7	23877.6	19531.4	10368.4	6024.5	4407.0	3633.8	3309.2	3168.5	3105.3	3110.9
60°	24798.2	24860.2	20313.6	9858.8	5410.8	4064.7	3408.9	3156.3	3032.2	2972.4	2990.1
62.5°	25495.0	25415.3	20727.9	9127.6	4795.9	3696.9	3165.1	2961.3	2862.7	2826.1	2827.2
65°	25731.0	25705.5	20485.3	8226.9	4215.4	3334.6	2877.1	2718.7	2657.7	2632.3	2651.1
67.5°	25489.5	25505.0	19540.3	7461.4	3663.7	2925.8	2553.6	2451.7	2420.7	2419.6	2439.5
70°	24828.1	24706.2	17580.5	6849.9	3146.3	2471.6	2205.7	2157.0	2147.0	2171.4	2188.0
72.5°	23099.8	22922.6	14579.3	5876.1	2415.1	1818.0	1670.6	1737.1	1734.9	1748.2	1763.7
75°	19789.6	19323.2	11419.7	4678.5	1789.2	1286.2	1114.5	1112.3	1109.0	1222.0	1263.0
77.5°	13870.3	13559.0	8430.8	3562.9	1189.8	770.0	764.4	824.2	834.2	760.0	774.4
80°	6958.4	7094.7	4865.7	2201.3	791.0	542.8	569.4	560.6	568.3	577.2	582.7
82.5°	3207.2	3275.9	2328.7	1072.4	509.6	412.1	390.0	424.3	439.8	438.7	435.4
85°	1137.8	1144.4	736.7	459.8	312.4	268.1	272.5	316.8	334.6	319.1	311.3
87.5°	330.1	313.5	150.7	136.3	144.0	142.9	147.3	156.2	168.4	166.2	154.0
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)