

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: P591304

Luminaire Tested: **CTN-CA10-310-730-U-T2-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591304  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-4)  
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-T2-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: 34569 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G4

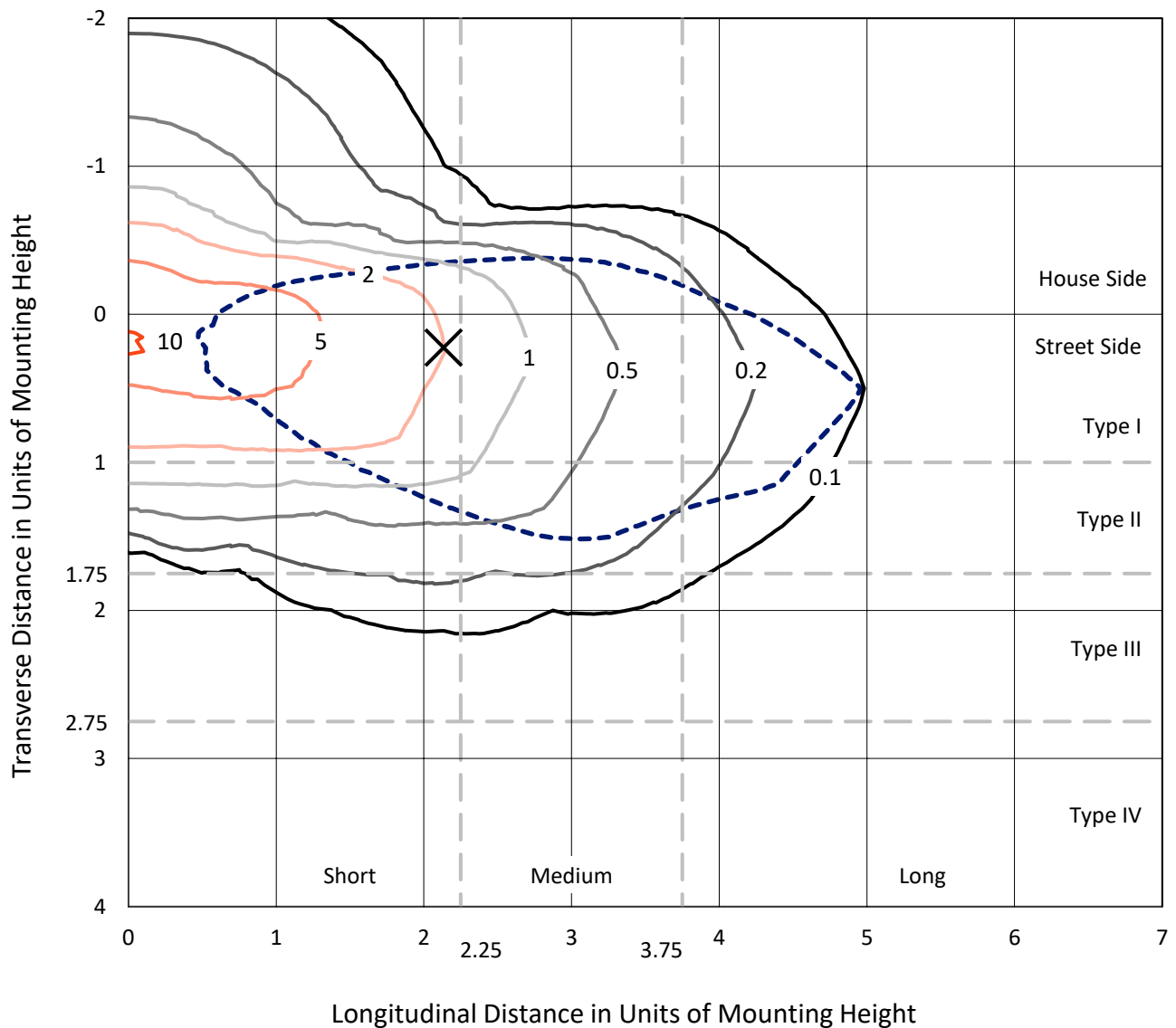
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

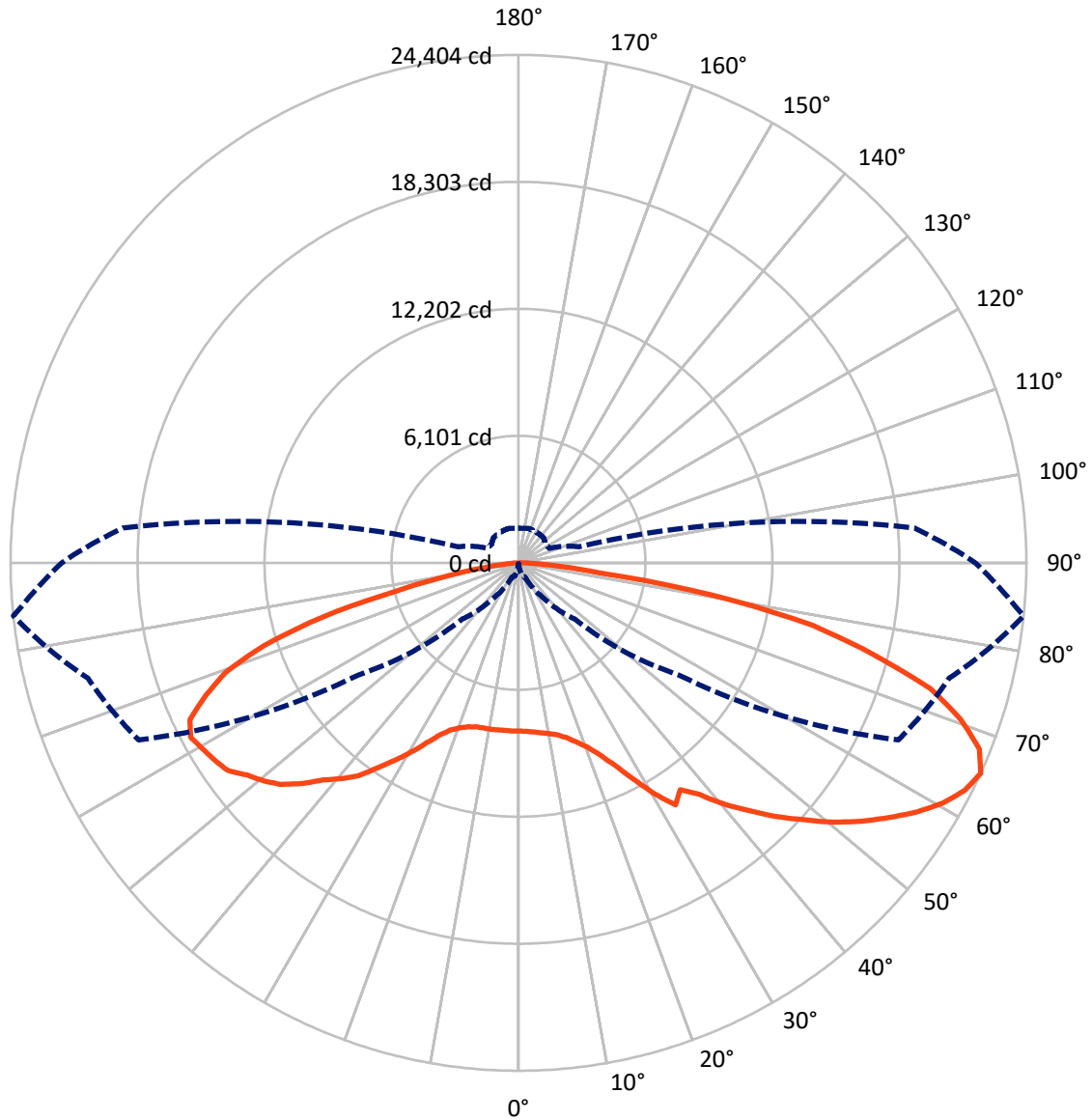
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.4 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 84-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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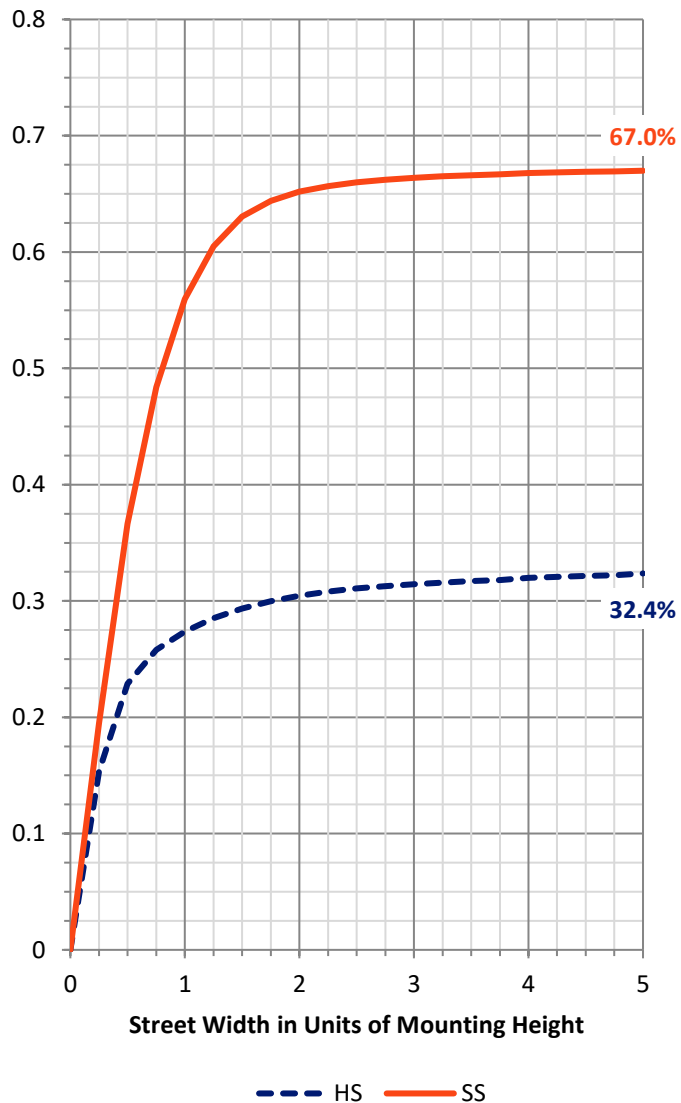
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11444.1	0.0	11444.1
	% Fixture	33.1	0.0	33.1
<b>Street Side</b>	Lumens	23124.9	0.0	23124.9
	% Fixture	66.9	0.0	66.9
<b>Total</b>	Lumens	34569.0	0.0	34569.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	780.1	2.3
10°-20°	2322.2	6.7
20°-30°	3489.0	10.1
30°-40°	4639.6	13.4
40°-50°	5728.6	16.6
50°-60°	6437.3	18.6
60°-70°	6313.6	18.3
70°-80°	4105.3	11.9
80°-90°	753.4	2.2
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°	34569.0	100.0
0°-180°	34569.0	100.0

**Coefficient of Utilization**



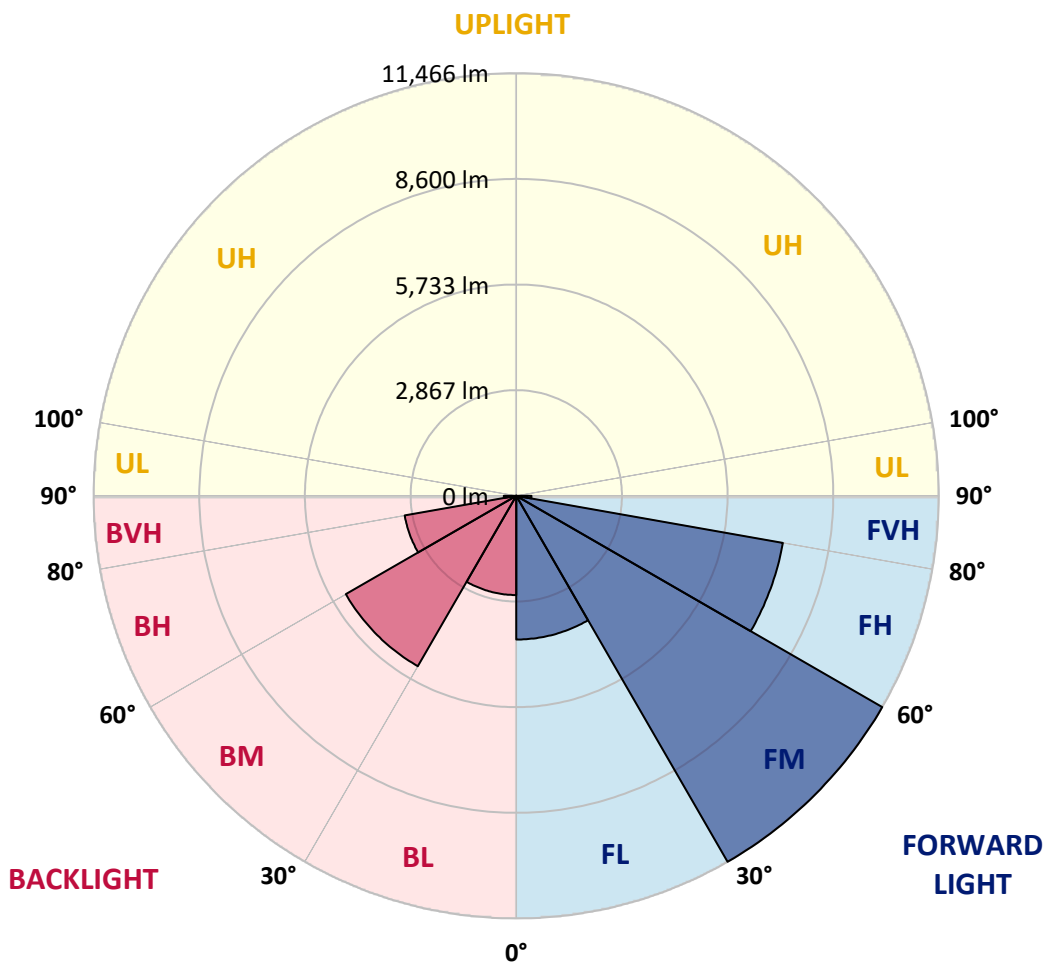
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3899.2	11.3			
FM (30°-60°)	11466.4	33.2			
FH (60°-80°)	7345.5	21.2			G3/7500
FVH (80°-90°)	413.9	1.2			G3/500
BL (0°-30°)	2692.1	7.8	B4/5000		
BM (30°-60°)	5339.1	15.4	B4/8500		
BH (60°-80°)	3073.4	8.9	B4/5000		G4/5000
BVH (80°-90°)	339.5	1.0			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	84°	85°
0°	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2
2.5°	8428.2	8348.8	8357.6	8395.9	8248.8	8297.3	8215.0	8229.7	8131.2	8113.6	8123.8
5°	9020.8	8935.5	8935.5	8959.0	8712.0	8645.8	8416.4	8378.2	8232.7	8168.0	8170.9
7.5°	9326.6	9242.8	9226.6	9248.7	9070.8	9085.5	8850.2	8625.2	8366.5	8251.8	8245.9
10°	9776.5	9682.4	9626.6	9628.0	9388.4	9297.2	9123.7	8966.4	8570.8	8347.3	8319.4
12.5°	10139.7	10067.7	10038.3	10016.2	9751.6	9691.3	9364.8	9236.9	8814.9	8492.9	8456.1
15°	10350.0	10282.4	10239.7	10189.7	10042.7	9944.2	9803.0	9511.9	9104.6	8726.7	8681.1
17.5°	9801.5	9685.4	9483.9	9395.7	9361.9	9504.5	10111.8	9963.3	9478.1	9059.0	9010.5
20°	8354.7	8460.6	8613.5	8266.5	8373.8	9434.0	10573.5	10560.3	10000.0	9457.5	9394.3
22.5°	7107.8	6828.4	7310.7	7840.1	8178.2	9178.1	10752.9	11249.9	10707.3	10017.7	9944.2
25°	5827.1	5985.9	6635.8	7701.8	8175.3	8984.0	10654.4	11779.2	11611.6	10780.8	10694.1
27.5°	5653.6	5656.5	6281.5	7097.5	8337.0	9434.0	10761.7	11799.8	12633.5	11767.4	11599.8
30°	5616.8	5599.2	5768.3	6759.3	8051.8	9854.5	11452.8	11983.6	12882.0	12870.2	12646.7
32.5°	5444.8	5434.5	5611.0	6060.9	7441.6	10300.0	12107.1	12840.8	12792.3	13864.2	13803.9
35°	5199.3	5236.0	5455.1	5922.7	7154.9	9929.5	12779.1	13823.0	13905.4	13381.9	13621.6
37.5°	4943.4	4964.0	5175.7	5740.4	6675.5	9281.0	13290.8	14786.1	15068.4	14123.0	13931.8
40°	4594.9	4637.6	4886.1	5521.3	6578.5	8679.6	12929.0	15883.0	16322.7	15253.7	14959.6
42.5°	4225.9	4246.5	4549.4	5165.4	6416.7	8688.5	12186.5	16830.0	17478.4	16285.9	15987.4
45°	3902.4	3908.3	4192.1	4743.4	6097.7	8634.1	11717.4	16868.2	18862.0	17391.6	17016.7
47.5°	3506.9	3562.7	3843.6	4393.5	5690.4	8451.7	11936.5	15681.6	20250.1	18445.9	18103.3
50°	2689.3	2733.4	3277.5	4050.9	5244.8	8147.4	12086.5	16637.3	18703.2	19589.9	19344.3
52.5°	2312.9	2237.9	2629.0	3665.7	4837.5	7640.1	12149.7	17978.3	18700.3	20625.0	20379.5
55°	989.6	1517.4	2368.8	3009.9	4465.5	6963.7	12104.2	19289.9	19611.9	21601.3	21516.1
57.5°	782.2	819.0	1740.9	2434.9	4024.4	6163.8	11898.3	20157.4	20411.8	22579.1	22336.5
60°	144.1	163.2	855.8	1029.3	2914.3	4969.9	11148.4	20280.9	20995.5	23430.5	23120.2
62.5°	66.2	77.9	688.1	857.2	2330.6	4087.7	10505.9	20241.2	21535.2	24062.8	23789.3
65°	30.9	39.7	616.1	777.8	2017.4	3814.2	9392.8	20133.9	21416.1	24403.9	23959.8
67.5°	23.5	33.8	566.1	698.4	1677.7	3542.1	8335.6	19007.6	20842.6	23876.0	23259.9
70°	23.5	33.8	517.6	635.2	1423.3	3196.6	6766.7	17597.5	19534.0	22542.4	22029.2
72.5°	25.0	33.8	460.2	574.9	1233.6	2759.9	5286.0	15346.3	17965.1	20701.5	20161.8
75°	25.0	33.8	397.0	508.8	1039.6	2311.4	3539.2	10969.0	15474.3	17619.6	17019.6
77.5°	25.0	33.8	329.4	424.9	846.9	1846.8	2289.4	5913.9	12174.7	14449.4	13680.4
80°	25.0	33.8	245.6	322.0	636.7	1302.8	1367.5	2981.9	6550.5	9492.8	9626.6
82.5°	25.0	32.3	170.6	235.3	416.1	714.6	755.8	1439.5	2417.3	3893.6	3948.0
85°	23.5	27.9	122.0	155.9	227.9	269.1	367.6	716.1	1158.7	1661.5	1648.3
87.5°	14.7	14.7	39.7	61.8	92.6	105.9	164.7	264.7	399.9	548.5	517.6
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°	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2	8081.2
2.5°	8122.4	8088.6	8045.9	8034.2	7934.2	7887.1	7791.5	7834.2	7785.7	7746.0	7791.5
5°	8134.1	8084.1	7994.5	7888.6	7675.4	7578.3	7443.1	7457.8	7387.2	7332.8	7363.7
7.5°	8163.5	8101.8	7960.6	7722.4	7468.1	7315.1	7174.0	7284.3	7235.7	7194.6	7225.4
10°	8178.2	8129.7	7879.8	7628.3	7262.2	7178.4	7001.9	6988.7	6993.1	6988.7	7037.2
12.5°	8217.9	8148.8	7785.7	7465.1	7153.4	6931.4	6822.6	6821.1	6681.4	6621.1	6647.6
15°	8335.6	8185.6	7722.4	7271.0	6927.0	6779.9	6435.8	6437.3	6378.5	6309.4	6307.9
17.5°	8570.8	8295.9	7722.4	7140.2	6718.2	6421.1	6121.2	5958.0	5918.3	5927.1	5921.2
20°	8881.1	8481.1	7719.5	6947.5	6424.1	6116.8	5684.5	5546.3	5421.3	5430.1	5430.1
22.5°	9326.6	8754.6	7725.4	6771.1	6143.2	5725.7	5239.0	5064.0	4930.2	4934.6	4934.6
25°	9966.2	9223.7	7794.5	6663.8	5766.8	5265.4	4774.3	4502.3	4365.6	4367.0	4370.0
27.5°	10780.8	9878.0	8034.2	6435.8	5453.6	4721.4	4183.2	3983.3	3846.5	3811.2	3811.2
30°	11702.7	10663.2	8344.4	6287.3	4968.4	4108.2	3661.2	3512.7	3348.1	3299.5	3299.5
32.5°	12724.7	11451.3	8664.9	6105.0	4511.1	3581.8	3209.8	3073.1	2867.2	2807.0	2786.4
35°	13787.7	12265.9	9054.6	5849.2	3936.2	3148.1	2818.7	2652.6	2504.1	2424.7	2405.5
37.5°	14361.2	13193.7	9406.0	5590.4	3492.1	2805.5	2437.9	2308.5	2210.0	2154.1	2143.8
40°	15149.3	13868.6	9588.3	5162.5	3014.3	2457.0	2086.5	2080.6	2093.8	2043.8	2040.9
42.5°	15952.1	14534.7	9538.3	4589.1	2642.3	2101.2	1910.0	2011.5	2085.0	2040.9	2043.8
45°	16956.4	15431.6	9720.7	3986.2	2274.7	1904.1	1873.3	1992.4	2093.8	2083.5	2083.5
47.5°	17972.4	16299.2	9384.0	3248.1	2027.7	1846.8	1877.7	1961.5	2087.9	2121.8	2114.4
50°	18800.3	16893.2	9176.6	2621.7	1888.0	1848.3	1892.4	1923.3	2061.5	2115.9	2114.4
52.5°	19469.3	17459.3	8403.2	2212.9	1808.6	1854.1	1939.4	1917.4	2014.4	2071.8	2105.6
55°	20416.2	18243.0	7522.5	2055.6	1767.4	1848.3	1955.6	1938.0	1977.7	2004.1	2029.1
57.5°	21148.5	18632.6	6343.2	1954.1	1730.6	1839.4	1942.4	1943.8	1963.0	1952.7	1942.4
60°	21763.1	18988.5	5189.0	1855.6	1683.6	1820.3	1886.5	1907.1	1901.2	1888.0	1861.5
62.5°	22063.0	19373.7	4030.3	1751.2	1633.6	1764.5	1795.3	1818.9	1805.6	1761.5	1758.6
65°	21949.8	19097.3	2987.8	1638.0	1573.3	1702.7	1701.2	1711.5	1717.4	1661.5	1667.4
67.5°	21314.6	17882.7	2276.1	1493.9	1504.2	1614.5	1607.1	1613.0	1596.8	1558.6	1564.5
70°	19467.8	16503.5	1614.5	1251.3	1363.0	1476.3	1486.6	1511.5	1474.8	1407.2	1411.6
72.5°	16737.3	14133.3	1132.2	996.9	1196.9	1341.0	1335.1	1333.6	1283.6	1310.1	1342.5
75°	14275.9	10823.5	860.2	802.8	945.5	1154.2	1220.4	1224.8	1232.2	1496.8	1516.0
77.5°	10989.6	6547.6	732.2	633.7	733.7	957.2	1080.7	1130.7	1552.7	1608.6	1579.2
80°	6549.1	3781.8	566.1	494.0	592.6	730.8	923.4	1193.9	1560.1	1393.9	1333.6
82.5°	3187.8	1754.2	411.7	376.4	436.7	530.8	724.9	1391.0	1320.4	1077.8	1063.1
85°	1189.5	592.6	247.0	257.3	291.1	348.5	551.4	1327.8	1013.1	877.8	829.3
87.5°	297.0	108.8	100.0	102.9	130.9	175.0	282.3	639.6	491.1	407.3	398.5
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)