

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: P232787

Luminaire Tested: **CTN-10-4-D-E1-T2-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232787  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-7)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-10-4-D-E1-T2-7030  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 3000K LEDS AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 41771 lumens  
Efficiency: N/A  
Efficacy: 135.6 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B4 - U0 - G4

Input Watts (W): 308  
Input Voltage (V): NR  
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: 25 FT

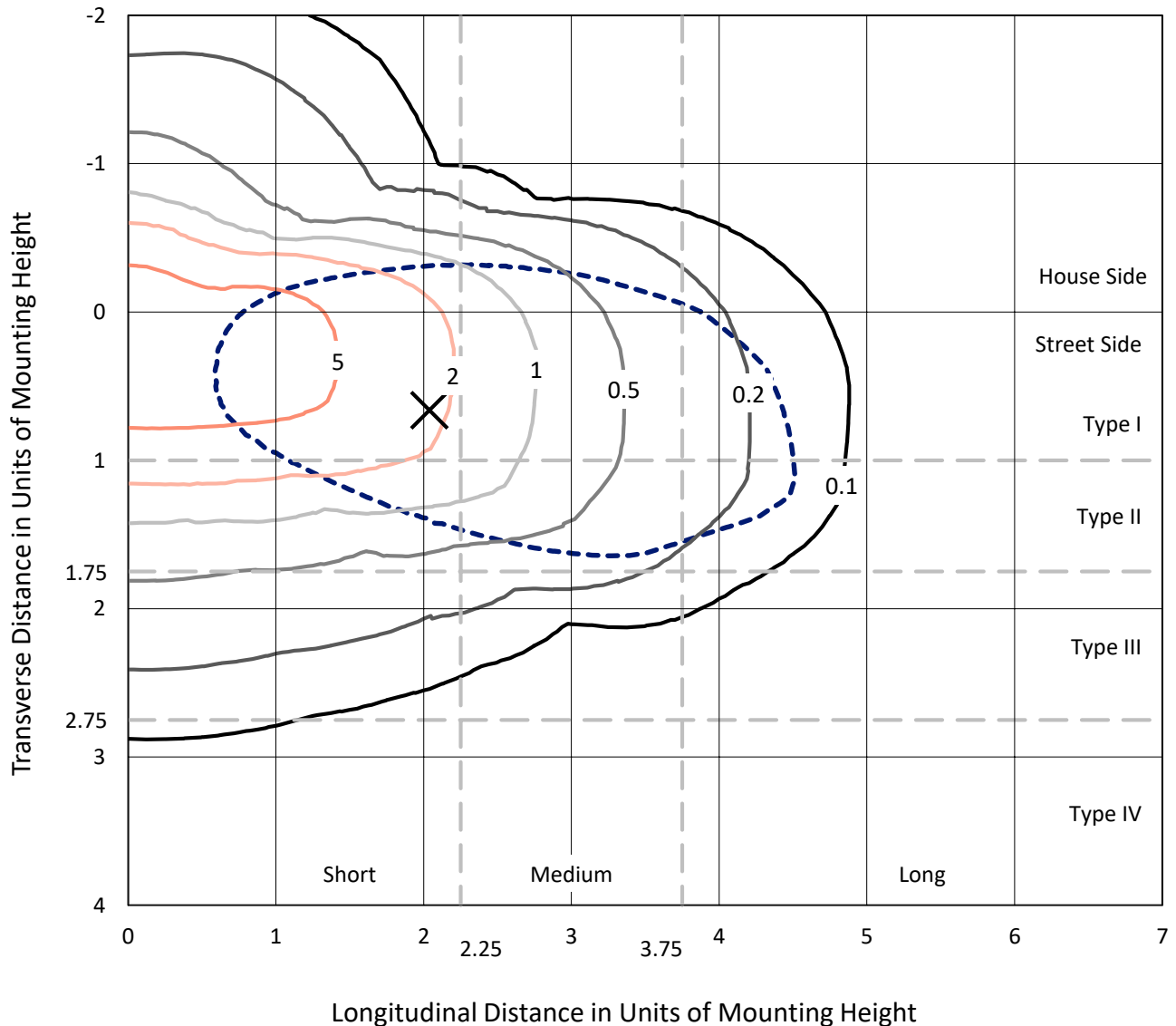


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### Iso-Footcandle Lines of Horizontal Illumination

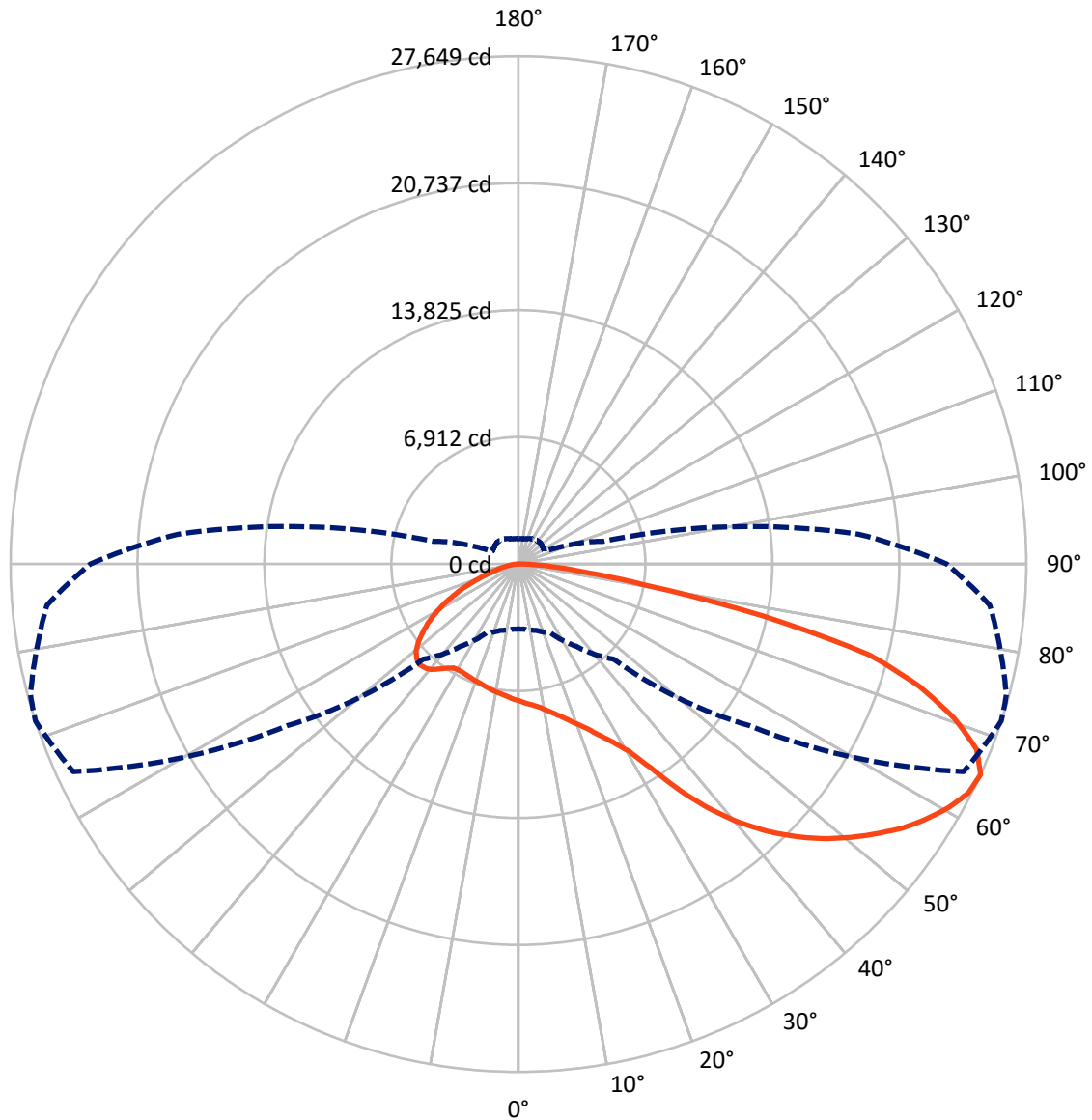
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.7 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 72-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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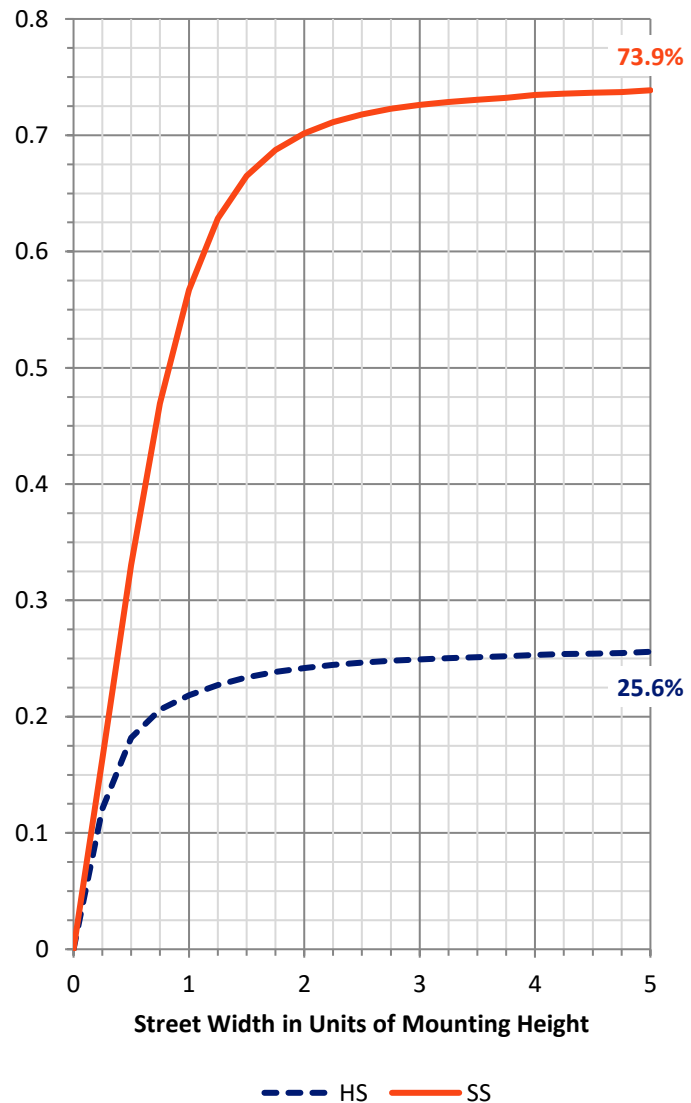
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10881.0	0.0	10881.0
	% Fixture	26.0	0.0	26.0
<b>Street Side</b>	Lumens	30890.0	0.0	30890.0
	% Fixture	74.0	0.0	74.0
<b>Total</b>	Lumens	41771.0	0.0	41771.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	716.9	1.7
10°-20°	2185.2	5.2
20°-30°	3660.2	8.8
30°-40°	5312.8	12.7
40°-50°	7184.0	17.2
50°-60°	8385.7	20.1
60°-70°	8349.4	20.0
70°-80°	5063.0	12.1
80°-90°	913.9	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°	41771.0	100.0
0°-180°	41771.0	100.0



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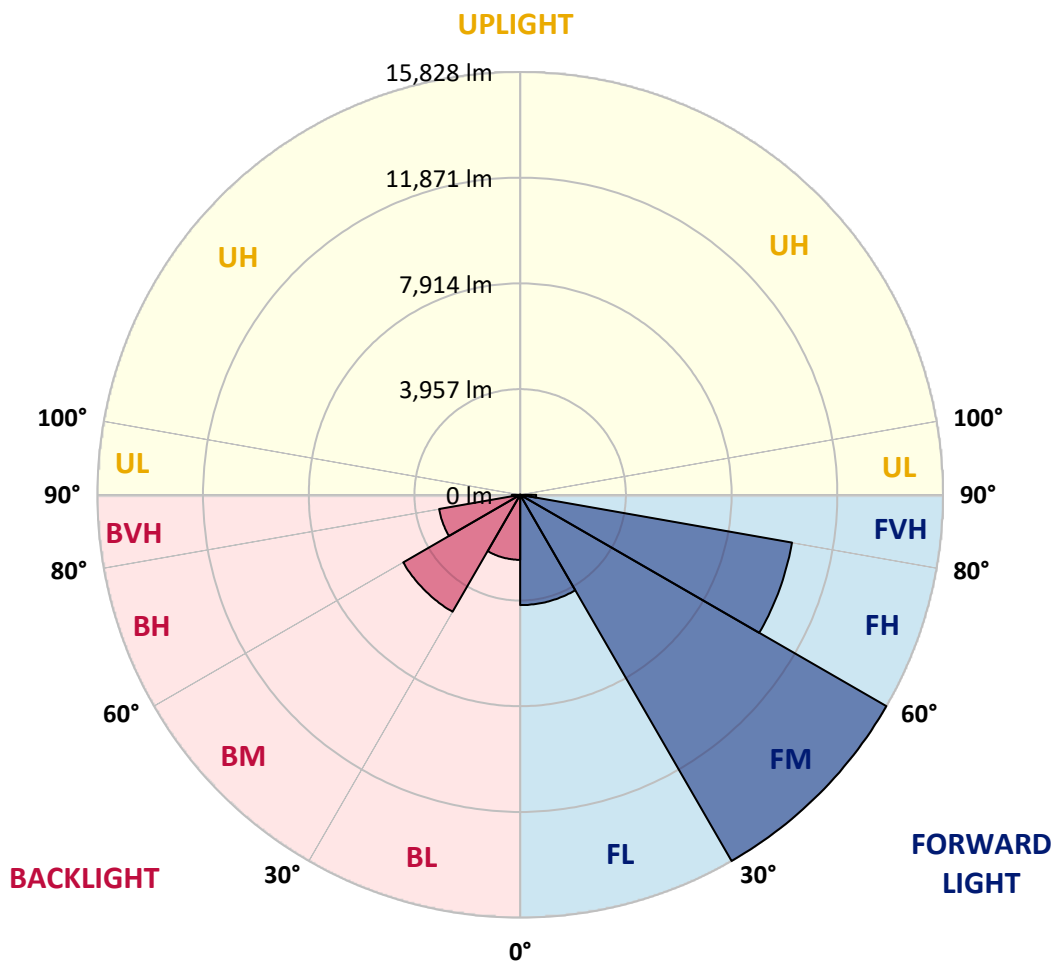
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4128.5	9.9			
FM	(30°-60°)	15828.0	37.9			
FH	(60°-80°)	10332.4	24.7			G4/12000
FVH	(80°-90°)	601.2	1.4			G4/750
BL	(0°-30°)	2433.8	5.8	B3/2500		
BM	(30°-60°)	5054.5	12.1	B4/8500		
BH	(60°-80°)	3079.9	7.4	B4/5000		G4/5000
BVH	(80°-90°)	312.7	0.7			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°	72°	75°	85°
0°	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8
2.5°	7843.7	7828.8	7833.8	7841.0	7751.9	7737.0	7663.3	7625.8	7584.7	7555.7	7490.6
5°	8247.4	8246.1	8214.0	8214.4	8074.7	8020.9	7884.9	7784.5	7697.2	7652.0	7516.4
7.5°	8613.6	8575.6	8572.5	8563.4	8405.7	8319.8	8139.4	7987.0	7853.7	7784.0	7573.8
10°	8957.7	8931.0	8931.4	8920.6	8758.7	8651.6	8434.6	8242.9	8064.8	7974.8	7668.8
12.5°	9324.8	9294.5	9289.5	9251.5	9102.8	8999.7	8762.4	8526.8	8311.2	8209.5	7812.5
15°	9701.3	9672.4	9657.9	9614.1	9448.2	9338.3	9139.4	8848.3	8602.8	8476.2	8001.5
17.5°	10048.5	10030.9	10006.5	9972.6	9827.5	9707.2	9508.3	9231.6	8938.2	8776.4	8218.9
20°	10262.8	10247.5	10263.7	10263.7	10180.1	10092.8	9892.6	9655.2	9338.3	9138.0	8469.0
22.5°	10426.9	10411.1	10483.5	10520.1	10528.7	10509.2	10312.6	10105.5	9775.5	9568.9	8778.2
25°	10467.2	10469.0	10591.5	10756.1	10878.1	10935.1	10783.6	10631.3	10346.5	10087.9	9200.9
27.5°	10455.4	10467.2	10624.1	10917.9	11210.4	11348.7	11294.0	11205.4	10979.8	10759.7	9765.5
30°	10438.2	10469.0	10676.0	11037.3	11460.4	11734.4	11789.1	11923.4	11812.6	11662.5	10661.1
32.5°	10224.9	10252.4	10549.0	11081.6	11673.3	12170.6	12465.0	13034.1	13214.5	13185.1	12047.2
35°	9725.3	9779.6	10219.4	10965.4	11837.5	12615.0	13313.5	14505.2	15129.6	15079.4	13646.3
37.5°	9216.3	9282.7	9810.3	10748.8	11911.6	13087.9	14242.1	16149.9	16904.4	16831.2	15182.9
40°	8754.7	8831.1	9363.6	10424.2	11891.7	13530.1	15217.7	17695.6	18484.9	18354.7	16553.2
42.5°	8221.2	8332.0	8817.1	9991.6	11736.6	13841.6	16182.9	19172.6	19887.3	19688.4	17800.0
45°	7724.4	7813.4	8279.5	9398.9	11500.2	14070.8	17065.8	20541.0	21162.7	20930.7	18948.8
47.5°	7185.9	7298.9	7767.3	8789.0	11030.5	14122.3	17874.2	21756.7	22341.7	22100.3	20020.2
50°	5765.5	5947.7	7005.5	8192.3	10301.3	13935.1	18592.1	22896.9	23401.4	23210.6	21128.8
52.5°	5026.8	5062.5	5597.7	7507.4	9413.4	13445.5	19110.2	24015.3	24397.8	24203.4	22109.8
55°	4696.3	4706.2	4945.8	6354.1	8552.1	12512.9	19361.1	25086.3	25373.9	25104.4	23038.4
57.5°	4356.8	4412.4	4653.3	5362.2	7742.4	11167.0	19187.0	26023.0	26194.4	25891.0	23891.0
60°	4076.0	4121.2	4361.7	4843.2	6854.1	9602.3	18376.0	26769.4	26920.4	26610.8	24691.2
62.5°	3821.5	3854.5	4040.8	4491.9	6051.6	8214.9	16862.4	26969.3	27476.1	27229.7	25430.8
65°	3532.6	3562.9	3735.6	4138.0	5464.4	7327.0	15339.8	26744.6	27649.2	27500.0	25763.6
67.5°	3189.5	3230.2	3386.1	3732.9	4859.5	6562.5	13542.3	26174.5	26910.5	26681.3	25046.1
70°	2738.7	2805.2	2982.0	3282.6	4152.9	5577.4	10803.1	24300.6	25174.9	24913.2	23130.1
72.5°	2159.2	2173.6	2301.6	2551.6	3288.9	4436.8	7290.8	20562.3	22845.8	22771.6	20460.6
75°	1609.9	1659.2	1864.4	2057.0	2402.8	3183.1	4431.8	14986.7	19724.1	19724.1	17243.5
77.5°	1313.8	1339.5	1476.1	1637.9	1873.9	2233.8	2817.4	8468.0	13595.2	14974.0	12960.9
80°	1026.7	1017.6	1027.1	1099.9	1322.8	1477.0	1873.0	4352.2	7023.6	7983.9	8490.2
82.5°	562.4	562.8	624.3	588.6	729.7	830.0	1136.1	2448.1	3670.0	4075.1	4548.5
85°	284.8	278.0	309.7	288.9	337.7	378.8	515.8	1216.1	1873.0	2030.3	2143.3
87.5°	101.7	96.7	111.2	133.4	124.8	132.5	178.1	437.2	723.8	774.4	759.1
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°	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8	7455.8
2.5°	7472.1	7428.7	7376.3	7332.4	7239.7	7191.4	7152.9	7163.8	7122.2	7062.1	7061.2
5°	7467.1	7384.4	7271.8	7178.7	7029.5	6952.7	6880.3	6861.3	6799.4	6739.7	6736.6
7.5°	7484.3	7374.4	7191.8	7043.1	6848.7	6728.9	6616.7	6572.9	6500.1	6437.3	6434.1
10°	7531.8	7386.7	7136.7	6930.5	6687.3	6523.2	6378.0	6289.9	6205.8	6141.2	6140.2
12.5°	7616.8	7422.8	7088.3	6819.3	6530.4	6312.9	6127.6	6013.7	5896.1	5848.2	5845.5
15°	7736.6	7475.7	7025.4	6671.5	6337.4	6089.6	5860.4	5709.9	5579.7	5533.5	5543.5
17.5°	7890.3	7562.1	6974.8	6508.2	6124.4	5825.6	5587.3	5435.9	5244.2	5201.7	5213.5
20°	8081.1	7695.4	6964.0	6359.1	5891.1	5535.4	5242.9	5135.7	4892.9	4836.0	4828.3
22.5°	8327.9	7852.8	6959.4	6199.5	5617.6	5201.7	4855.0	4718.9	4515.0	4419.2	4397.5
25°	8633.5	8034.9	6951.7	6039.9	5312.9	4821.5	4399.7	4208.5	4081.0	3935.9	3932.7
27.5°	9035.9	8279.5	6969.8	5881.7	4980.6	4378.0	3911.0	3679.1	3605.8	3511.8	3463.0
30°	9729.4	8715.3	7019.1	5690.4	4617.2	3867.6	3375.7	3199.9	3109.9	3014.5	2998.2
32.5°	10893.5	9658.4	7171.5	5483.4	4212.5	3315.6	2937.7	2753.7	2604.5	2555.2	2542.1
35°	12351.5	10778.2	7563.0	5261.8	3774.9	2878.4	2576.9	2334.1	2191.7	2180.0	2179.1
37.5°	13661.2	11972.6	8073.4	4988.8	3292.6	2566.5	2218.8	2009.5	1902.4	1913.2	1941.7
40°	14927.9	13032.3	8614.5	4716.6	2824.2	2236.5	1871.2	1770.8	1722.9	1761.8	1780.8
42.5°	16117.8	14000.2	9004.2	4347.3	2418.7	1882.0	1631.6	1690.8	1708.0	1740.1	1753.2
45°	17230.0	14992.1	9294.0	3902.4	2053.8	1632.0	1597.2	1699.4	1748.2	1773.1	1771.7
47.5°	18305.9	15940.1	9380.8	3314.3	1771.7	1604.5	1628.9	1687.2	1763.6	1809.3	1806.1
50°	19379.6	16802.7	9308.0	2716.6	1714.8	1657.8	1659.2	1649.7	1738.7	1775.8	1761.8
52.5°	20342.1	17608.3	8896.6	2273.5	1752.7	1713.9	1694.9	1647.0	1672.3	1698.0	1685.4
55°	21207.4	18280.6	8251.5	2055.2	1785.3	1750.0	1775.3	1682.2	1632.0	1610.3	1614.4
57.5°	22012.6	18799.1	7510.1	1919.6	1778.5	1741.4	1807.4	1672.7	1599.5	1508.2	1490.5
60°	22776.2	19139.6	6675.1	1802.5	1746.4	1728.8	1737.8	1673.2	1569.2	1450.7	1421.8
62.5°	23316.0	19157.7	5716.6	1698.0	1684.5	1709.3	1683.1	1660.1	1577.3	1487.4	1469.3
65°	23305.1	18594.8	4768.6	1578.2	1607.2	1657.4	1612.1	1535.7	1410.5	1383.8	1374.8
67.5°	22293.8	17170.3	3849.1	1400.6	1481.9	1587.3	1510.4	1386.1	1278.1	1246.4	1252.3
70°	20094.8	15156.2	2842.7	1135.2	1293.9	1467.9	1420.0	1281.7	1163.2	1138.4	1165.0
72.5°	17488.5	13019.7	2020.8	900.1	1074.6	1298.8	1279.9	1160.5	1056.5	1066.9	1090.9
75°	14600.6	10364.1	1482.4	774.4	843.6	1107.2	1155.1	1078.7	1012.7	1045.7	1044.8
77.5°	10881.7	7653.8	1128.9	649.6	698.5	861.7	1018.1	989.2	1169.1	1420.9	1429.0
80°	7150.7	4969.3	761.8	533.5	571.4	646.5	830.9	953.0	1197.1	1037.5	1024.9
82.5°	3962.1	2637.5	472.4	415.0	429.0	468.8	602.2	995.0	879.3	816.0	819.2
85°	1756.8	1021.3	278.9	278.5	279.4	284.4	386.5	754.5	618.5	599.0	609.0
87.5°	608.5	269.0	87.7	69.6	78.7	98.6	201.2	460.2	322.8	267.6	268.5
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)