

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: P232790

Luminaire Tested: **CTN-10-9-D-E1-T2-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232790  
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-10-9-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: 89912 lumens  
Efficiency: N/A  
Efficacy: 118.3 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B5 - U0 - G5

Input Watts (W): 760  
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

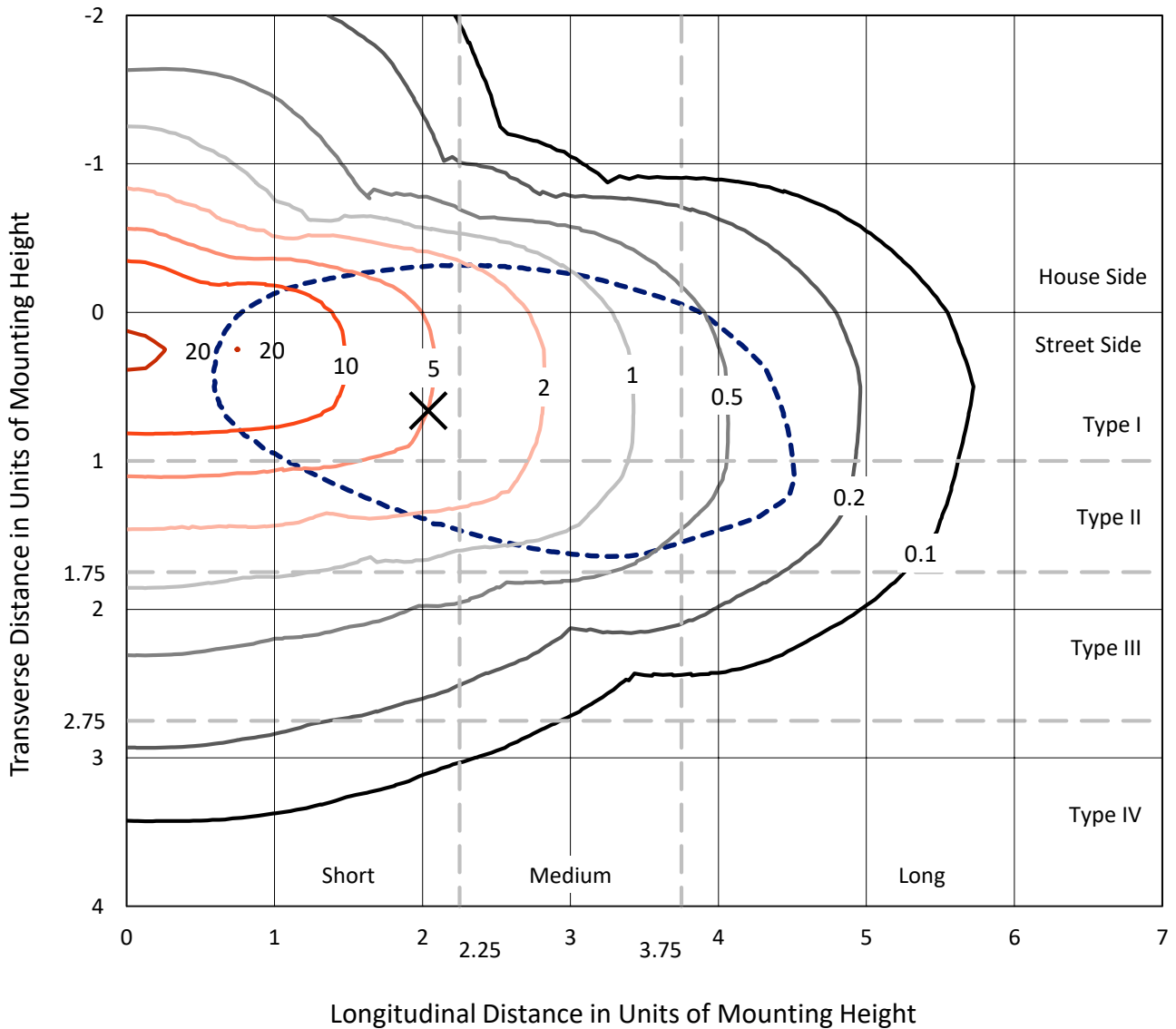


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### Iso-Footcandle Lines of Horizontal Illumination

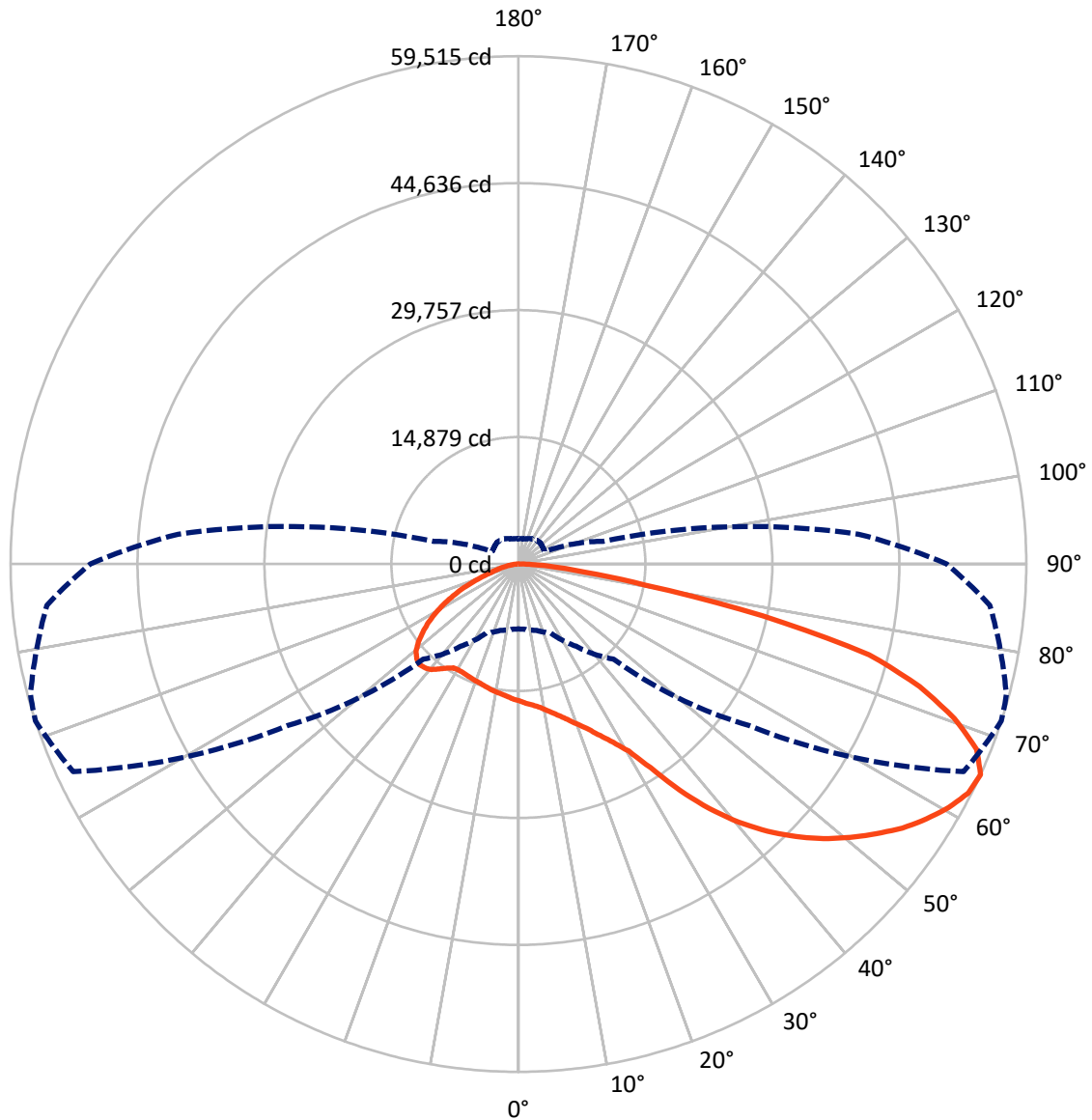
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 20.9 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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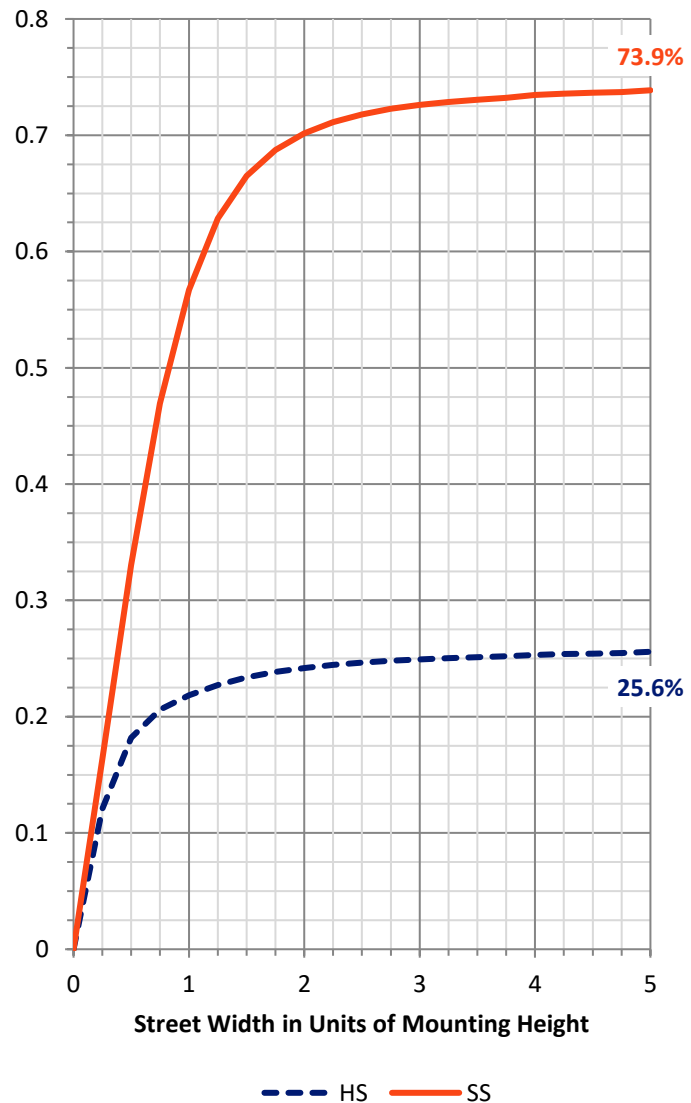
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	23421.2	0.0	23421.2
	% Fixture	26.0	0.0	26.0
<b>Street Side</b>	Lumens	66490.7	0.0	66490.7
	% Fixture	74.0	0.0	74.0
<b>Total</b>	Lumens	89912.0	0.0	89912.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1543.2	1.7
10°-20°	4703.6	5.2
20°-30°	7878.6	8.8
30°-40°	11435.7	12.7
40°-50°	15463.5	17.2
50°-60°	18050.1	20.1
60°-70°	17972.0	20.0
70°-80°	10898.1	12.1
80°-90°	1967.2	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°	89912.0	100.0
0°-180°	89912.0	100.0



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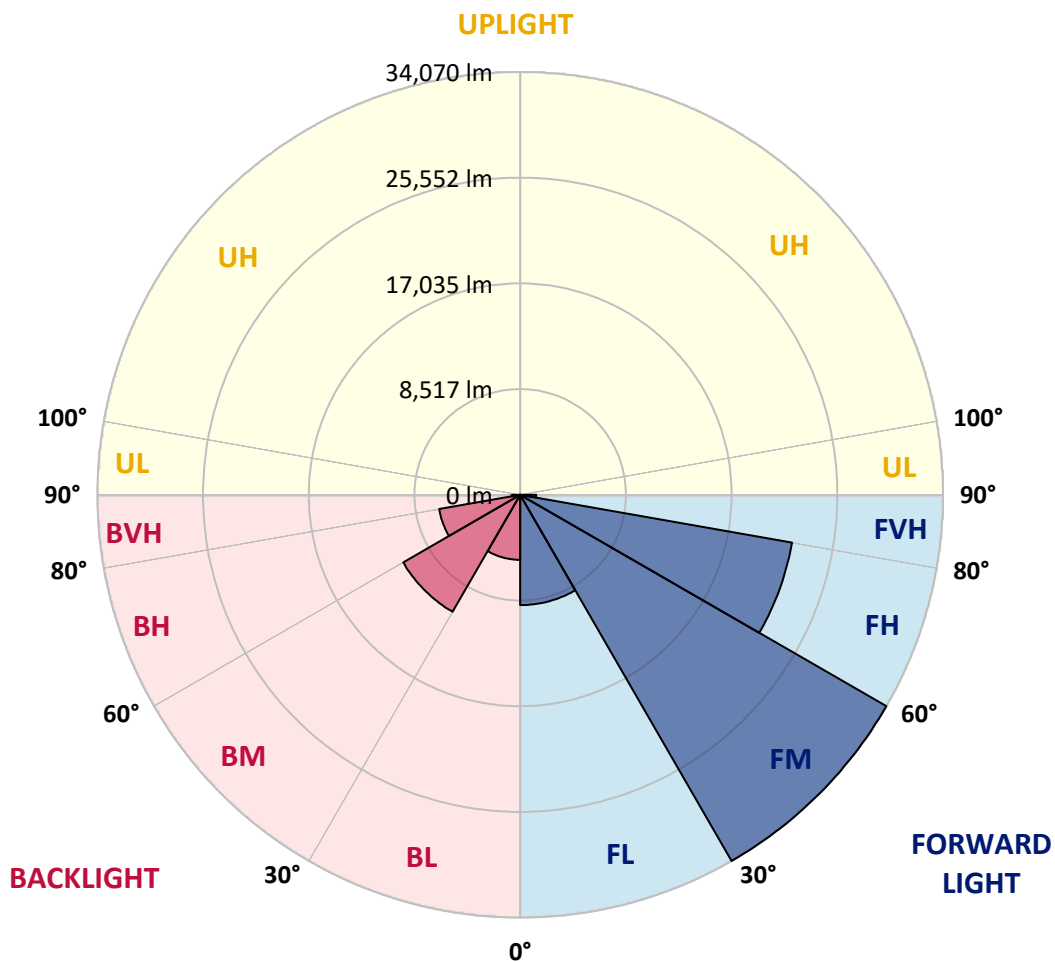
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	8886.5	9.9			
FM	(30°-60°)	34069.7	37.9			
FH	(60°-80°)	22240.5	24.7			G5
FVH	(80°-90°)	1294.1	1.4			G5
BL	(0°-30°)	5238.8	5.8	B5		
BM	(30°-60°)	10879.7	12.1	B5		
BH	(60°-80°)	6629.6	7.4	B5		G5
BVH	(80°-90°)	673.2	0.7			G4/750
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	72°	75°	85°
0°	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6
2.5°	16883.6	16851.5	16862.2	16877.7	16686.0	16653.9	16495.3	16414.5	16326.0	16263.7	16123.6
5°	17752.6	17749.7	17680.6	17681.5	17380.8	17265.0	16972.1	16756.1	16568.3	16471.0	16179.0
7.5°	18540.8	18459.1	18452.2	18432.8	18093.2	17908.3	17520.0	17192.1	16905.0	16755.1	16302.6
10°	19281.3	19223.9	19224.9	19201.5	18853.2	18622.5	18155.4	17742.8	17359.4	17165.8	16507.0
12.5°	20071.5	20006.3	19995.6	19913.9	19593.7	19371.8	18861.0	18354.0	17889.8	17670.8	16816.4
15°	20882.1	20819.8	20788.7	20694.3	20337.2	20100.7	19672.5	19045.8	18517.4	18245.0	17223.2
17.5°	21629.5	21591.5	21539.0	21466.0	21153.6	20894.8	20466.6	19871.1	19239.5	18891.1	17691.3
20°	22090.7	22057.6	22092.7	22092.7	21912.7	21724.8	21293.7	20782.9	20100.7	19669.6	18229.4
22.5°	22444.0	22409.9	22565.6	22644.4	22662.9	22621.1	22197.8	21752.1	21041.7	20597.0	18895.0
25°	22530.6	22534.5	22798.2	23152.4	23415.1	23537.8	23211.8	22883.8	22270.8	21714.1	19804.9
27.5°	22505.3	22530.6	22868.3	23500.8	24130.4	24428.2	24310.4	24119.7	23634.1	23160.2	21020.3
30°	22468.3	22534.5	22980.2	23757.7	24668.5	25258.2	25376.0	25665.0	25426.6	25103.5	22948.0
32.5°	22009.0	22068.3	22706.7	23853.0	25126.9	26197.3	26830.8	28055.9	28444.2	28381.0	25931.6
35°	20933.7	21050.5	21997.3	23603.0	25480.1	27153.9	28657.3	31222.5	32566.3	32458.3	29373.5
37.5°	19838.0	19981.0	21116.6	23136.8	25639.7	28171.7	30656.1	34762.7	36386.8	36229.1	32681.2
40°	18844.4	19008.9	20155.2	22438.1	25596.9	29123.4	32756.1	38089.7	39788.8	39508.6	35630.7
42.5°	17696.1	17934.5	18978.7	21506.9	25263.1	29793.9	34833.7	41268.9	42807.4	42379.2	38314.5
45°	16626.7	16818.4	17821.7	20231.1	24754.2	30287.3	36734.2	44214.5	45552.6	45053.4	40787.2
47.5°	15467.7	15711.0	16719.1	18918.4	23743.1	30398.2	38474.1	46831.3	48090.5	47570.8	43093.5
50°	12410.2	12802.3	15079.4	17633.9	22173.4	29995.4	40019.4	49285.5	50371.5	49960.8	45479.6
52.5°	10820.1	10897.0	12049.1	16159.6	20262.2	28941.5	41134.6	51693.0	52516.2	52097.8	47591.3
55°	10108.7	10130.1	10645.9	13677.2	18408.5	26933.9	41674.7	53998.3	54617.2	54037.2	49590.0
57.5°	9377.9	9497.6	10016.3	11542.1	16665.6	24037.0	41300.1	56014.6	56383.4	55730.4	51425.3
60°	8773.6	8870.9	9388.6	10425.0	14753.4	20669.0	39554.3	57621.2	57946.2	57279.6	53147.8
62.5°	8225.8	8296.8	8697.7	9668.9	13026.1	17682.5	36296.3	58051.3	59142.2	58611.8	54739.8
65°	7603.9	7669.1	8040.9	8906.9	11762.1	15771.3	33018.8	57567.7	59514.9	59193.7	55456.0
67.5°	6865.3	6952.9	7288.6	8035.0	10460.0	14125.8	29149.7	56340.6	57924.8	57431.4	53911.7
70°	5895.1	6038.2	6418.7	7065.8	8939.1	12005.3	23253.6	52307.0	54189.0	53625.6	49787.6
72.5°	4647.6	4678.7	4954.1	5492.3	7079.4	9550.2	15693.5	44260.3	49175.5	49015.9	44041.3
75°	3465.3	3571.3	4013.1	4427.7	5172.1	6851.7	9539.5	32258.8	42456.1	42456.1	37116.6
77.5°	2827.9	2883.3	3177.2	3525.6	4033.6	4808.2	6064.5	18227.5	29263.6	32231.6	27898.3
80°	2209.9	2190.5	2210.9	2367.6	2847.3	3179.2	4031.6	9368.2	15118.3	17185.2	18275.1
82.5°	1210.6	1211.5	1343.9	1267.0	1570.6	1786.6	2445.4	5269.4	7899.8	8771.7	9790.5
85°	613.1	598.5	666.6	621.8	726.9	815.5	1110.3	2617.7	4031.6	4370.3	4613.5
87.5°	219.0	208.2	239.4	287.1	268.6	285.1	383.4	941.0	1558.0	1666.9	1633.9
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6	16048.6
2.5°	16083.7	15990.3	15877.4	15783.0	15583.5	15479.4	15396.7	15420.0	15330.5	15201.1	15199.1
5°	16073.0	15894.9	15652.6	15452.1	15131.0	14965.6	14809.9	14769.0	14635.7	14507.2	14500.4
7.5°	16110.0	15873.5	15480.3	15160.2	14741.8	14483.9	14242.5	14148.1	13991.5	13856.2	13849.4
10°	16212.1	15899.8	15361.6	14917.9	14394.3	14041.1	13728.7	13539.0	13358.0	13218.8	13216.9
12.5°	16395.1	15977.6	15257.5	14678.5	14056.7	13588.6	13189.6	12944.4	12691.4	12588.2	12582.4
15°	16653.0	16091.5	15122.2	14360.3	13641.2	13107.9	12614.5	12290.5	12010.2	11911.0	11932.4
17.5°	16983.8	16277.3	15013.3	14009.0	13182.8	12539.6	12026.8	11700.8	11288.2	11196.7	11222.0
20°	17394.5	16564.4	14989.9	13687.9	12680.7	11914.8	11285.2	11054.6	10532.0	10409.4	10392.9
22.5°	17925.8	16903.0	14980.2	13344.4	12092.0	11196.7	10450.3	10157.4	9718.5	9512.2	9465.5
25°	18583.6	17295.2	14963.6	13000.8	11436.1	10378.3	9470.4	9058.7	8784.3	8472.0	8465.1
27.5°	19449.7	17821.7	15002.5	12660.3	10720.8	9423.7	8418.4	7919.2	7761.6	7559.2	7454.1
30°	20942.5	18759.8	15108.6	12248.6	9938.4	8325.0	7266.3	6887.7	6694.1	6488.7	6453.7
32.5°	23448.2	20789.7	15436.6	11802.9	9067.5	7136.8	6323.3	5927.3	5606.1	5500.1	5471.8
35°	26586.5	23200.1	16279.3	11326.1	8125.5	6195.8	5546.8	5024.2	4717.7	4692.4	4690.4
37.5°	29405.7	25771.1	17377.9	10738.3	7087.2	5524.4	4776.1	4325.5	4094.9	4118.2	4179.5
40°	32132.3	28052.0	18542.7	10152.5	6079.1	4814.0	4027.7	3811.7	3708.5	3792.2	3833.1
42.5°	34693.6	30135.5	19381.6	9357.5	5206.2	4051.1	3512.0	3639.5	3676.4	3745.5	3773.7
45°	37087.4	32270.5	20005.3	8399.9	4420.9	3513.0	3438.0	3657.9	3763.0	3816.6	3813.6
47.5°	39403.5	34311.1	20192.2	7133.9	3813.6	3453.6	3506.1	3631.7	3796.1	3894.4	3887.6
50°	41714.6	36167.8	20035.5	5847.5	3691.0	3568.4	3571.3	3550.9	3742.6	3822.4	3792.2
52.5°	43786.4	37901.9	19150.0	4893.8	3772.8	3689.1	3648.2	3545.1	3599.6	3655.0	3627.8
55°	45648.9	39349.0	17761.3	4423.8	3842.8	3766.9	3821.4	3621.0	3513.0	3466.2	3475.0
57.5°	47382.0	40465.1	16165.4	4131.9	3828.2	3748.4	3890.5	3600.5	3442.9	3246.3	3208.4
60°	49025.6	41197.9	14368.1	3879.8	3759.2	3721.2	3740.7	3601.5	3377.7	3122.7	3060.5
62.5°	50187.5	41236.8	12305.1	3655.0	3625.8	3679.4	3622.9	3573.3	3395.2	3201.6	3162.6
65°	50164.2	40025.3	10264.4	3397.2	3459.4	3567.4	3470.1	3305.7	3036.1	2978.7	2959.2
67.5°	47987.3	36959.0	8285.1	3014.7	3189.9	3416.6	3251.2	2983.6	2751.0	2682.9	2695.5
70°	43254.1	32623.8	6119.0	2443.5	2785.1	3159.7	3056.6	2758.8	2503.8	2450.3	2507.7
72.5°	37644.1	28024.8	4349.8	1937.5	2313.1	2795.8	2754.9	2498.0	2274.2	2296.6	2348.1
75°	31427.8	22308.7	3190.9	1666.9	1815.8	2383.2	2486.3	2321.9	2179.8	2250.8	2248.9
77.5°	23422.9	16474.9	2429.9	1398.4	1503.5	1854.8	2191.5	2129.2	2516.5	3058.5	3076.0
80°	15391.8	10696.5	1639.7	1148.3	1230.0	1391.6	1788.6	2051.3	2576.8	2233.3	2206.1
82.5°	8528.4	5677.2	1016.9	893.3	923.5	1009.1	1296.2	2141.8	1892.7	1756.5	1763.3
85°	3781.5	2198.3	600.4	599.4	601.4	612.1	832.0	1624.1	1331.2	1289.4	1310.8
87.5°	1309.8	579.0	188.8	149.9	169.3	212.1	433.0	990.6	694.8	576.1	578.0
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)