

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: P232806

Luminaire Tested: **CTN-10-9-D-E1-T2-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232806
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-T2-7050
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 5000K LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 93328 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B5 - U0 - G5

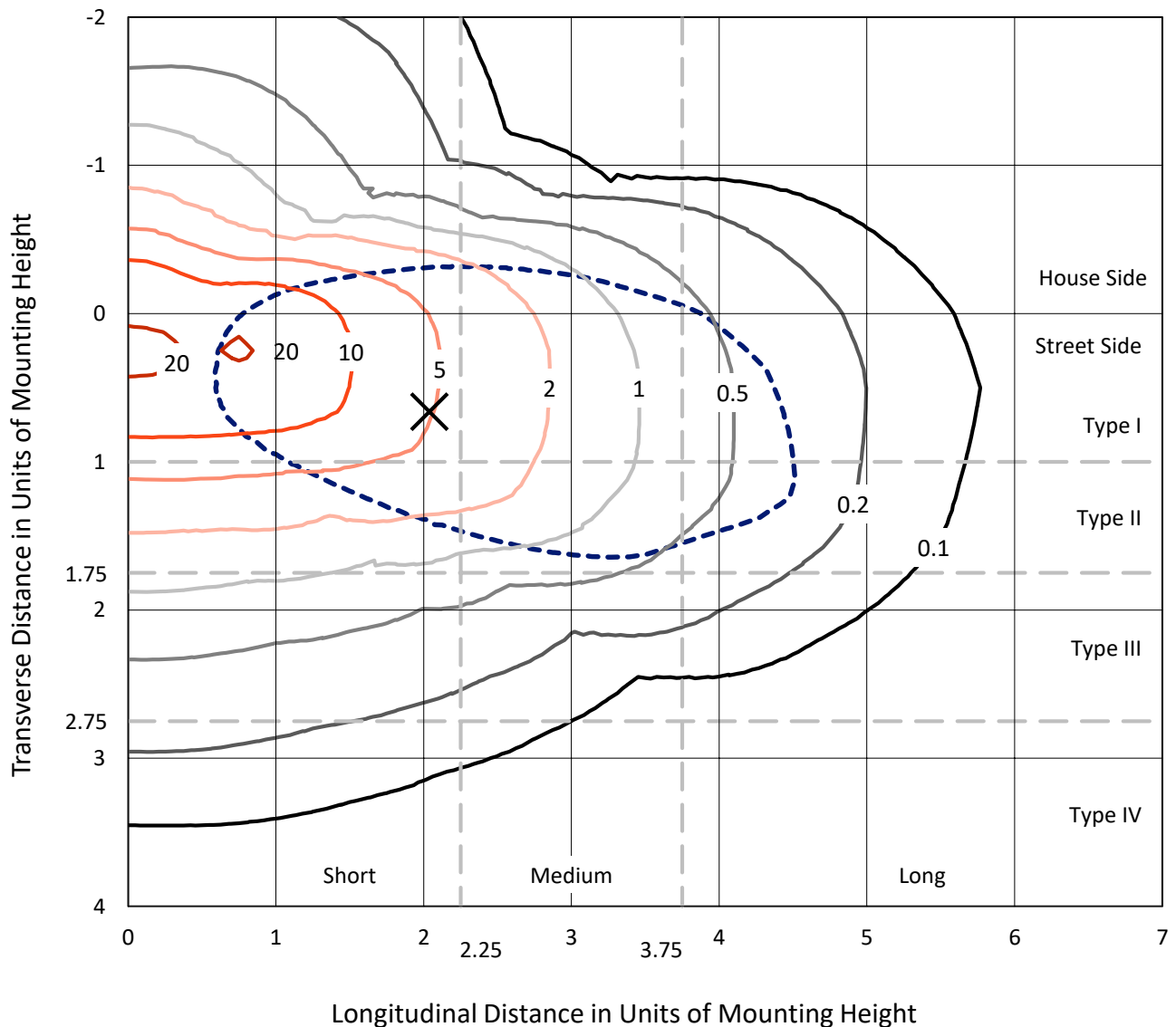
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

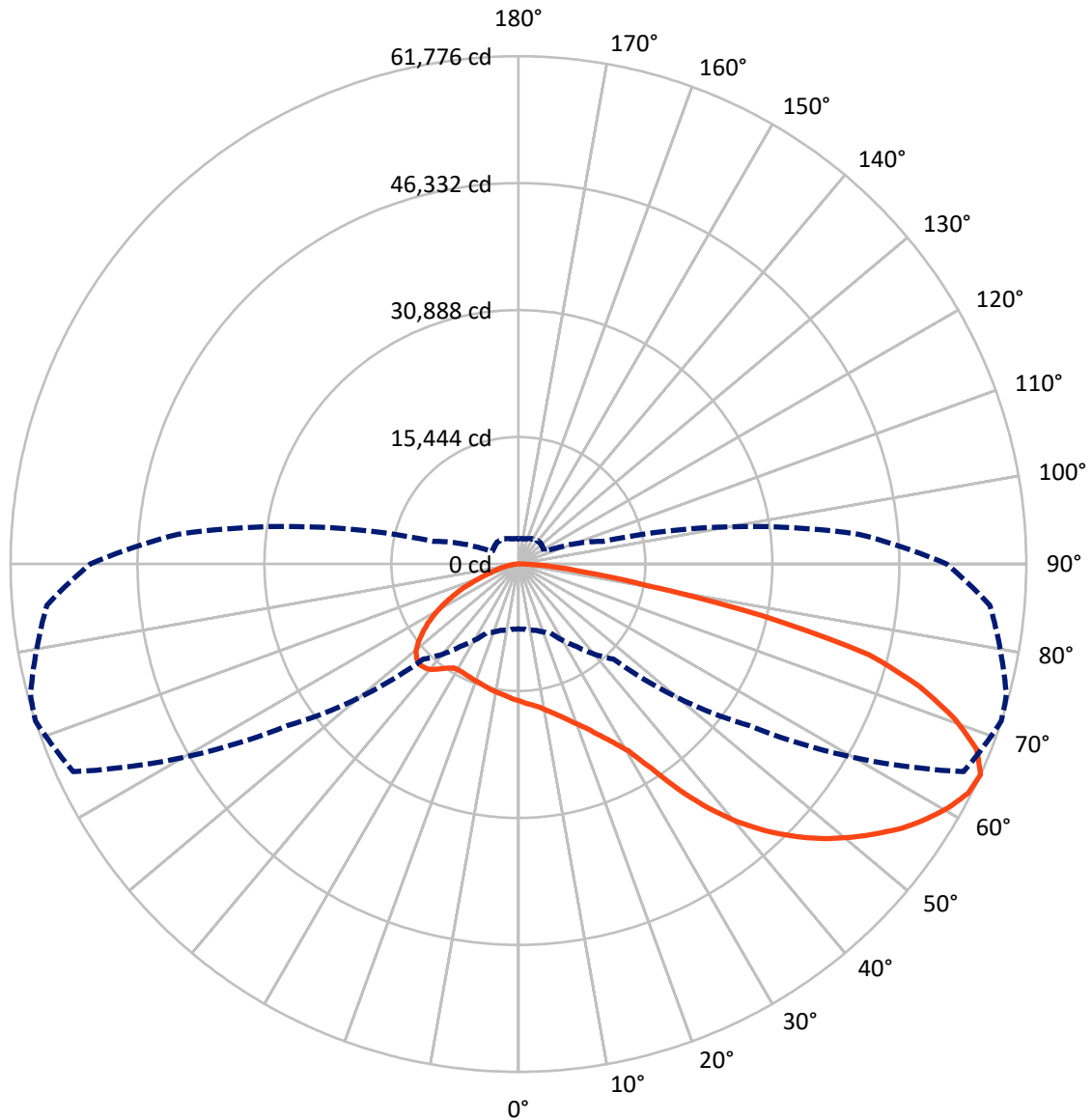
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 21.7 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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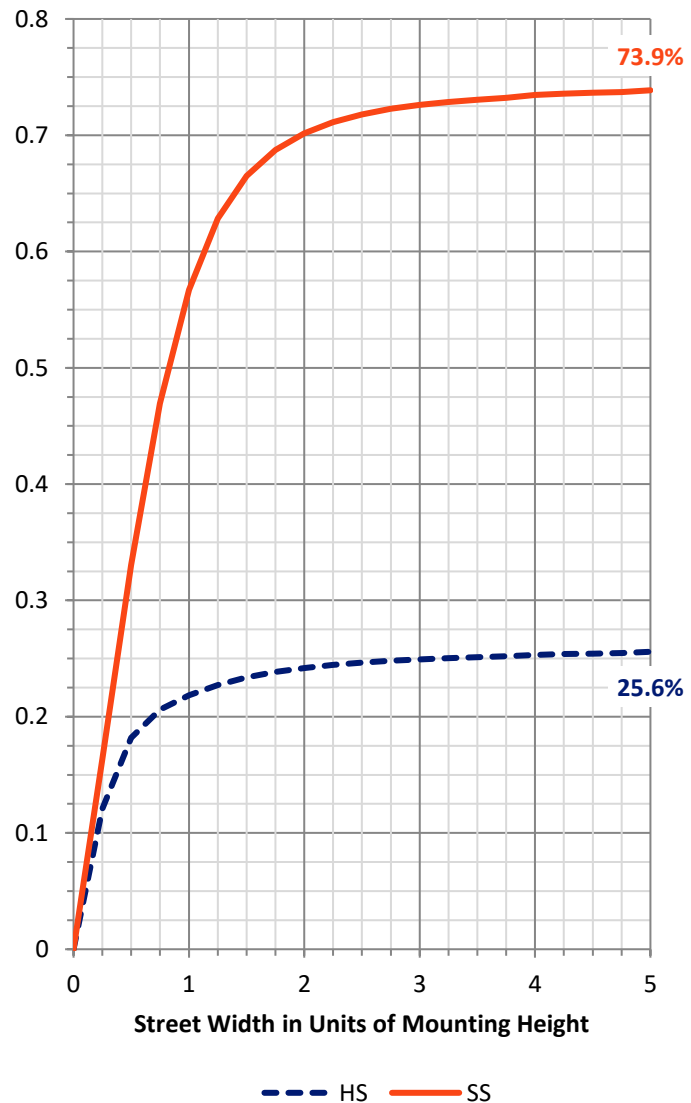
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	24311.1	0.0	24311.1
	% Fixture	26.0	0.0	26.0
Street Side	Lumens	69016.9	0.0	69016.9
	% Fixture	74.0	0.0	74.0
Total	Lumens	93328.0	0.0	93328.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1601.8	1.7
10°-20°	4882.3	5.2
20°-30°	8177.9	8.8
30°-40°	11870.2	12.7
40°-50°	16051.0	17.2
50°-60°	18735.9	20.1
60°-70°	18654.8	20.0
70°-80°	11312.1	12.1
80°-90°	2042.0	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°	93328.0	100.0
0°-180°	93328.0	100.0



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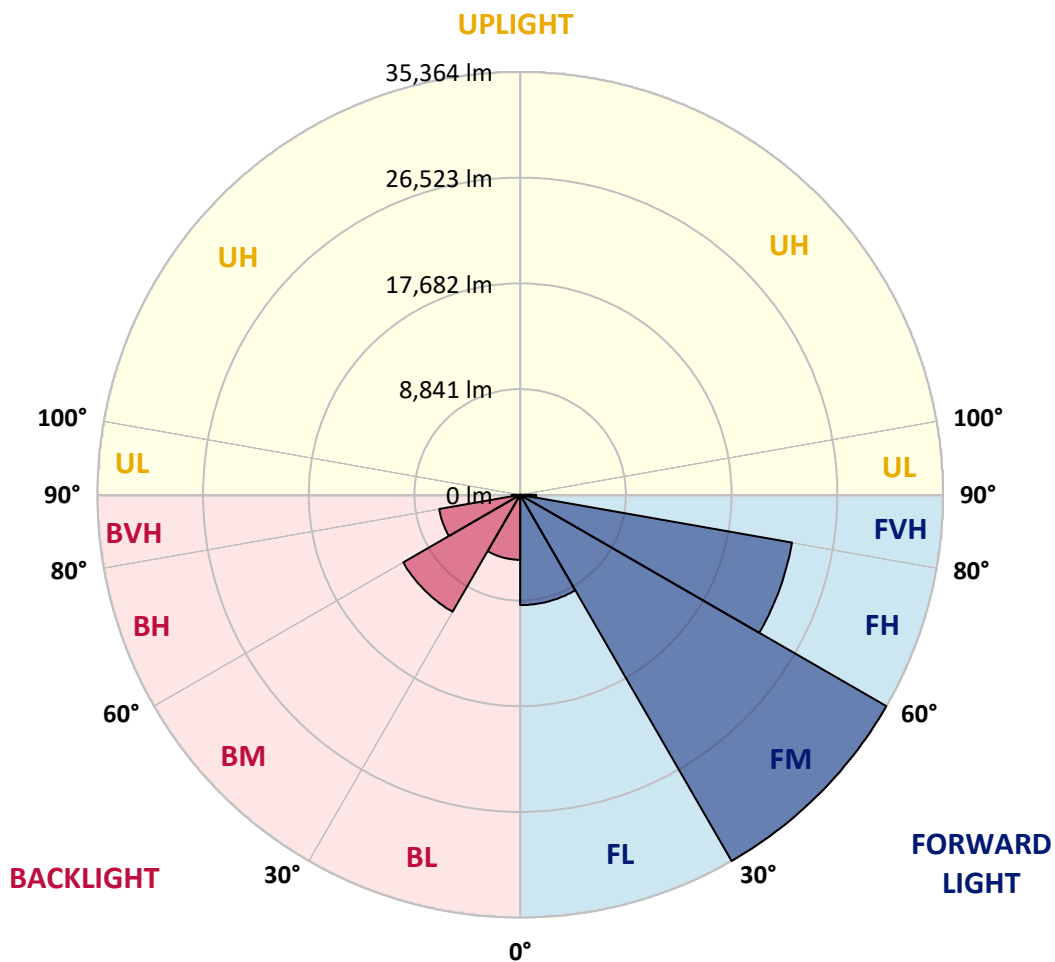
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	9224.1	9.9			
FM (30°-60°)	35364.1	37.9			
FH (60°-80°)	23085.5	24.7			G5
FVH (80°-90°)	1343.2	1.4			G5
BL (0°-30°)	5437.8	5.8	B5		
BM (30°-60°)	11293.1	12.1	B5		
BH (60°-80°)	6881.5	7.4	B5		G5
BVH (80°-90°)	698.7	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°	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4
2.5°	17525.0	17491.7	17502.8	17519.0	17320.0	17286.7	17122.0	17038.2	16946.3	16881.6	16736.2
5°	18427.0	18424.0	18352.3	18353.3	18041.2	17921.0	17617.0	17392.7	17197.8	17096.8	16793.7
7.5°	19245.2	19160.4	19153.3	19133.1	18780.6	18588.7	18185.6	17845.2	17547.3	17391.7	16922.0
10°	20013.9	19954.3	19955.3	19931.1	19569.5	19330.1	18845.2	18416.9	18019.0	17818.0	17134.1
12.5°	20834.1	20766.4	20755.3	20670.4	20338.1	20107.8	19577.5	19051.3	18569.5	18342.2	17455.3
15°	21675.5	21610.8	21578.5	21480.5	21109.8	20864.4	20419.9	19769.5	19221.0	18938.1	17877.6
17.5°	22451.2	22411.8	22357.3	22281.5	21957.3	21688.6	21244.2	20626.0	19970.5	19608.8	18363.4
20°	22930.0	22895.7	22932.0	22932.0	22745.2	22550.2	22102.8	21572.5	20864.4	20416.9	18922.0
22.5°	23296.7	23261.3	23422.9	23504.8	23523.9	23480.5	23041.1	22578.5	21841.1	21379.5	19612.9
25°	23386.6	23390.6	23664.4	24032.0	24304.7	24432.0	24093.6	23753.2	23116.9	22539.1	20557.3
27.5°	23360.3	23386.6	23737.1	24393.6	25047.2	25356.3	25234.0	25036.1	24532.0	24040.1	21818.9
30°	23321.9	23390.6	23853.2	24660.3	25605.7	26217.9	26340.1	26640.1	26392.6	26057.3	23819.9
32.5°	22845.2	22906.8	23569.4	24759.3	26081.5	27192.6	27850.2	29121.9	29524.9	29459.2	26916.8
35°	21729.0	21850.2	22833.0	24499.7	26448.2	28185.5	29746.1	32408.7	33803.6	33691.5	30489.5
37.5°	20591.7	20740.1	21918.9	24015.9	26613.8	29242.1	31820.8	36083.4	37769.2	37605.6	33922.8
40°	19560.4	19731.1	20921.0	23290.6	26569.4	30229.9	34000.6	39536.9	41300.5	41009.6	36984.4
42.5°	18368.5	18615.9	19699.8	22324.0	26222.9	30925.9	36157.1	42836.8	44433.8	43989.4	39770.2
45°	17258.4	17457.4	18498.8	20999.7	25694.6	31438.0	38129.8	45894.4	47283.2	46765.1	42336.8
47.5°	16055.4	16307.9	17354.3	19637.1	24645.1	31553.1	39935.9	48610.5	49917.6	49378.2	44730.8
50°	12881.7	13288.7	15652.3	18303.8	23015.9	31135.0	41539.9	51157.9	52285.2	51859.0	47207.5
52.5°	11231.2	11311.0	12506.9	16773.5	21032.1	30041.0	42697.4	53656.9	54511.4	54077.1	49399.4
55°	10492.8	10515.0	11050.4	14196.8	19107.8	27957.2	43258.0	56049.8	56692.2	56090.2	51474.1
57.5°	9734.2	9858.5	10396.8	11980.7	17298.8	24950.2	42869.2	58142.7	58525.5	57847.8	53379.1
60°	9107.0	9208.0	9745.3	10821.1	15314.0	21454.3	41057.1	59810.4	60147.7	59455.8	55167.0
62.5°	8538.3	8612.0	9028.2	10036.2	13521.0	18354.3	37675.3	60256.8	61389.1	60838.6	56819.5
65°	7892.8	7960.5	8346.4	9245.3	12208.9	16370.5	34273.3	59754.8	61776.0	61442.7	57562.9
67.5°	7126.2	7217.1	7565.6	8340.3	10857.4	14662.4	30257.2	58481.1	60125.5	59613.4	55959.9
70°	6119.1	6267.6	6662.5	7334.3	9278.7	12461.5	24137.1	54294.3	56247.8	55662.9	51679.2
72.5°	4824.2	4856.5	5142.4	5700.9	7348.4	9913.0	16289.7	45941.9	51043.8	50878.2	45714.6
75°	3596.9	3707.0	4165.6	4595.9	5368.6	7112.0	9901.9	33484.4	44069.1	44069.1	38526.8
77.5°	2935.3	2992.9	3297.9	3659.6	4186.8	4990.8	6294.9	18920.0	30375.4	33456.1	28958.2
80°	2293.9	2273.7	2294.9	2457.5	2955.5	3300.0	4184.8	9724.1	15692.7	17838.2	18969.5
82.5°	1256.6	1257.6	1394.9	1315.1	1630.3	1854.5	2538.4	5469.6	8199.9	9104.9	10162.5
85°	636.4	621.2	691.9	645.4	754.5	846.5	1152.5	2717.1	4184.8	4536.3	4788.8
87.5°	227.3	216.2	248.5	298.0	278.8	296.0	398.0	976.8	1617.2	1730.3	1695.9
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°	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4	16658.4
2.5°	16694.7	16597.8	16480.6	16382.6	16175.6	16067.5	15981.6	16005.9	15912.9	15778.6	15776.6
5°	16683.6	16498.8	16247.3	16039.2	15705.9	15534.2	15372.5	15330.1	15191.7	15058.4	15051.3
7.5°	16722.0	16476.6	16068.5	15736.2	15301.8	15034.2	14783.7	14685.7	14523.1	14382.6	14375.6
10°	16828.1	16503.8	15945.3	15484.7	14941.2	14574.6	14250.3	14053.4	13865.5	13721.0	13719.0
12.5°	17018.0	16584.6	15837.2	15236.2	14590.7	14104.9	13690.7	13436.2	13173.6	13066.5	13060.4
15°	17285.6	16702.8	15696.8	14905.9	14159.4	13605.9	13093.8	12757.4	12466.5	12363.5	12385.7
17.5°	17629.1	16895.7	15583.6	14541.2	13683.7	13016.0	12483.7	12145.3	11717.0	11622.1	11648.3
20°	18055.3	17193.7	15559.4	14207.9	13162.5	12367.5	11714.0	11474.6	10932.2	10804.9	10787.7
22.5°	18606.8	17545.2	15549.3	13851.3	12551.4	11622.1	10847.3	10543.3	10087.8	9873.6	9825.1
25°	19289.7	17952.3	15532.1	13494.8	11870.6	10772.6	9830.2	9402.9	9118.1	8793.8	8786.8
27.5°	20188.6	18498.8	15572.5	13141.3	11128.1	9781.7	8738.3	8220.1	8056.5	7846.4	7737.3
30°	21738.1	19472.5	15682.6	12714.0	10316.0	8641.3	7542.3	7149.4	6948.4	6735.3	6698.9
32.5°	24339.1	21579.5	16023.0	12251.4	9412.0	7408.0	6563.6	6152.4	5819.1	5709.0	5679.7
35°	27596.6	24081.5	16897.8	11756.4	8434.2	6431.2	5757.5	5215.1	4896.9	4870.6	4868.6
37.5°	30522.9	26750.2	18038.2	11146.3	7356.5	5734.3	4957.5	4489.8	4250.5	4274.7	4338.3
40°	33353.1	29117.8	19247.2	10538.3	6310.0	4996.9	4180.8	3956.5	3849.4	3936.3	3978.7
42.5°	36011.7	31280.4	20117.9	9713.0	5404.0	4205.0	3645.4	3777.7	3816.1	3887.8	3917.1
45°	38496.5	33496.6	20765.4	8719.1	4588.8	3646.4	3568.6	3796.9	3906.0	3961.6	3958.5
47.5°	40900.5	35614.7	20959.3	7405.0	3958.5	3584.8	3639.3	3769.7	3940.4	4042.4	4035.3
50°	43299.5	37542.0	20796.7	6069.6	3831.3	3704.0	3707.0	3685.8	3884.8	3967.6	3936.3
52.5°	45449.9	39341.9	19877.5	5079.7	3916.1	3829.2	3786.8	3679.8	3736.3	3793.9	3765.6
55°	47383.2	40843.9	18436.1	4591.9	3988.8	3910.1	3966.6	3758.5	3646.4	3597.9	3607.0
57.5°	49182.2	42002.5	16779.6	4288.8	3973.7	3890.9	4038.3	3737.3	3573.7	3369.7	3330.3
60°	50888.3	42763.1	14914.0	4027.2	3902.0	3862.6	3882.8	3738.3	3506.0	3241.4	3176.7
62.5°	52094.3	42803.5	12772.6	3793.9	3763.6	3819.1	3760.6	3709.0	3524.2	3323.2	3282.8
65°	52070.1	41545.9	10654.4	3526.2	3590.9	3703.0	3602.0	3431.3	3151.5	3091.9	3071.7
67.5°	49810.5	38363.2	8599.9	3129.3	3311.1	3546.4	3374.7	3096.9	2855.5	2784.8	2797.9
70°	44897.4	33863.2	6351.4	2536.3	2890.9	3279.8	3172.7	2863.6	2599.0	2543.4	2603.0
72.5°	39074.3	29089.5	4515.1	2011.1	2401.0	2902.0	2859.6	2592.9	2360.6	2383.8	2437.3
75°	32621.8	23156.3	3312.1	1730.3	1884.8	2473.7	2580.8	2410.1	2262.6	2336.3	2334.3
77.5°	24312.8	17100.8	2522.2	1451.5	1560.6	1925.2	2274.7	2210.1	2612.1	3174.7	3192.9
80°	15976.6	11102.9	1702.0	1191.9	1276.8	1444.4	1856.5	2129.3	2674.7	2318.2	2289.9
82.5°	8852.4	5892.9	1055.5	927.3	958.6	1047.5	1345.4	2223.2	1964.6	1823.2	1830.3
85°	3925.2	2281.8	623.2	622.2	624.2	635.3	863.6	1685.8	1381.8	1338.4	1360.6
87.5°	1359.6	601.0	196.0	155.6	175.8	220.2	449.5	1028.3	721.2	598.0	600.0
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)