

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: P232797

Luminaire Tested: **CTN-10-8-D-E1-T2**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232797  
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-10-8-D-E1-T2  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 80468 lumens  
Efficiency: N/A  
Efficacy: 127.5 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B5 - U0 - G5

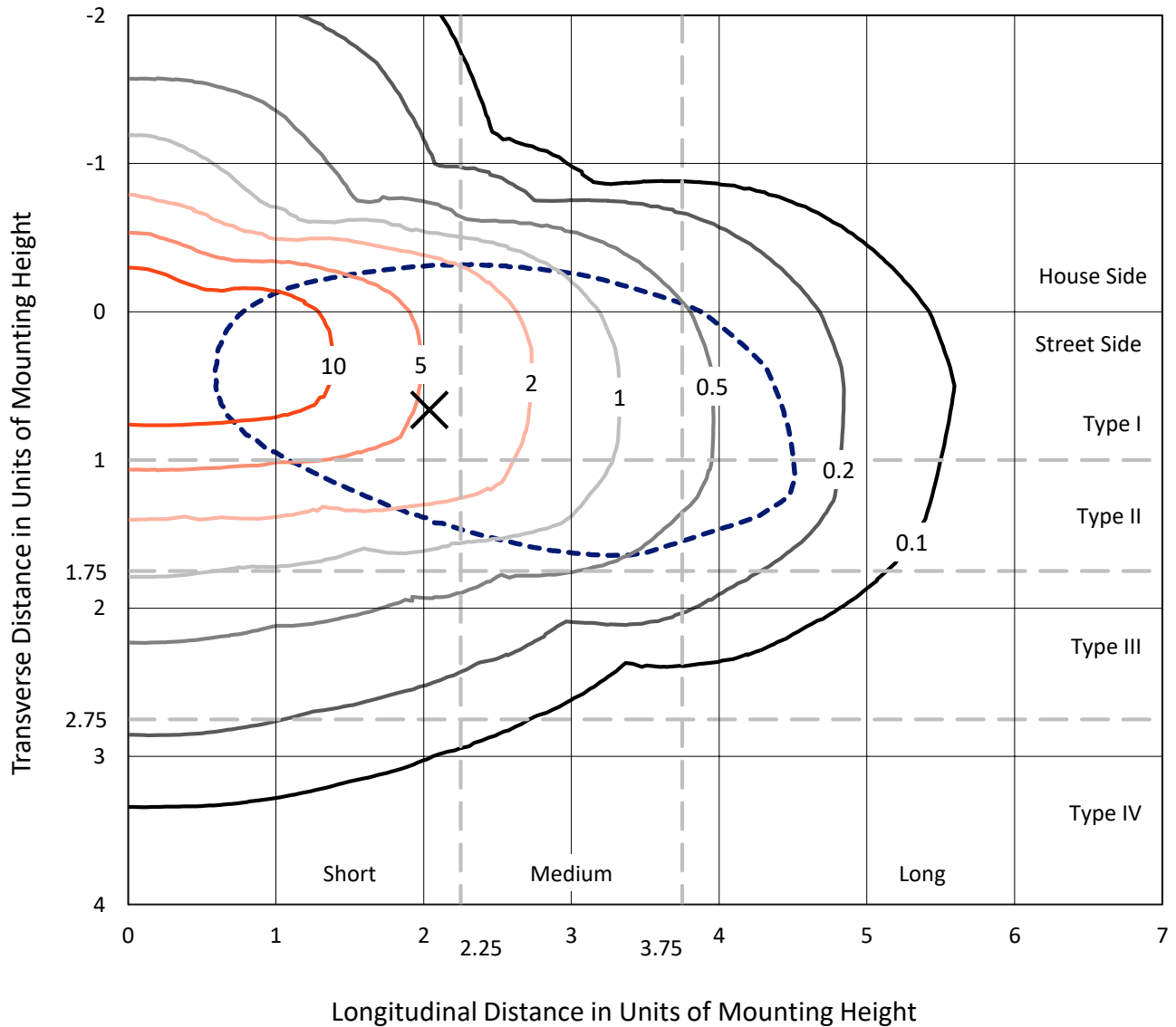
Input Watts (W): 631  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

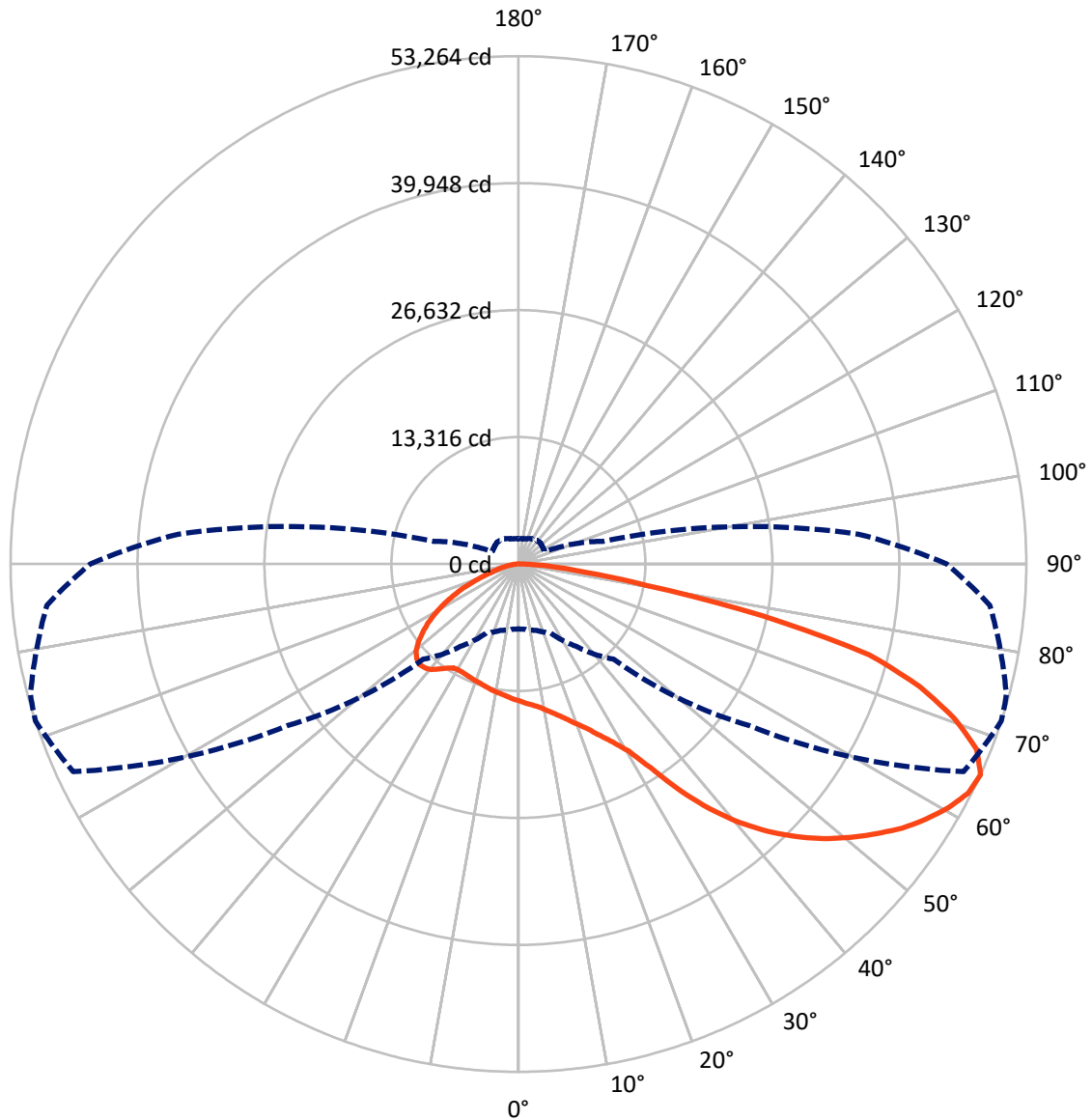


Based on 30 foot mounting height. Maximum calculated value = 18.7 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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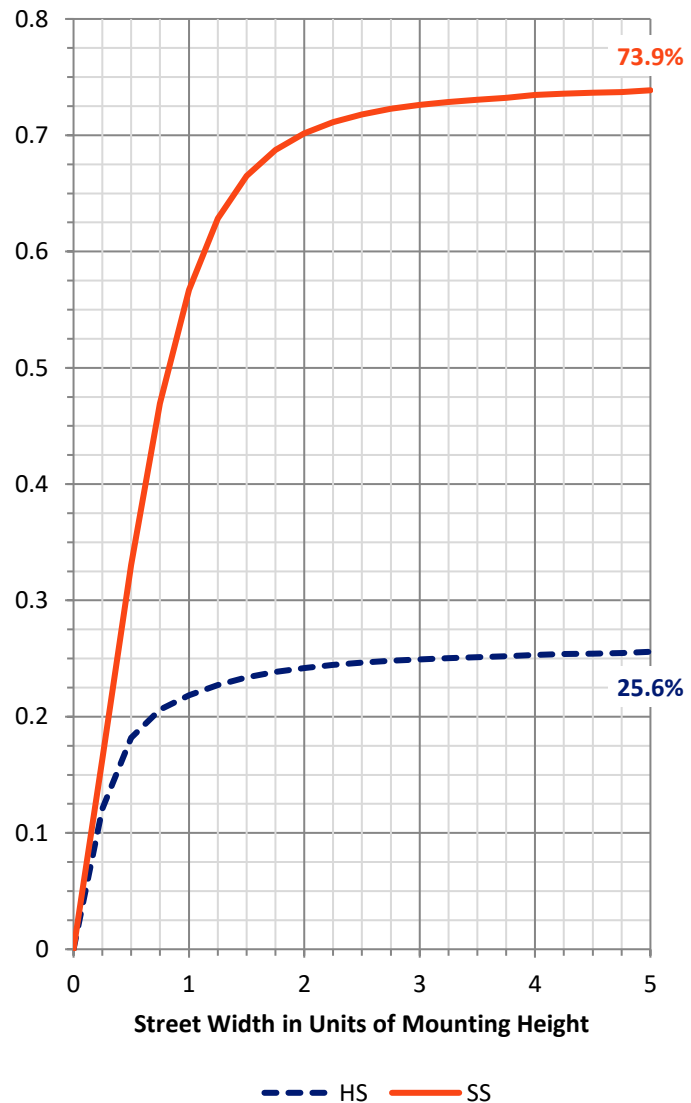
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	20961.2	0.0	20961.2
	% Fixture	26.0	0.0	26.0
<b>Street Side</b>	Lumens	59506.8	0.0	59506.8
	% Fixture	74.0	0.0	74.0
<b>Total</b>	Lumens	80468.0	0.0	80468.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1381.1	1.7
10°-20°	4209.5	5.2
20°-30°	7051.0	8.8
30°-40°	10234.6	12.7
40°-50°	13839.3	17.2
50°-60°	16154.2	20.1
60°-70°	16084.3	20.0
70°-80°	9753.4	12.1
80°-90°	1760.6	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°	80468.0	100.0
0°-180°	80468.0	100.0



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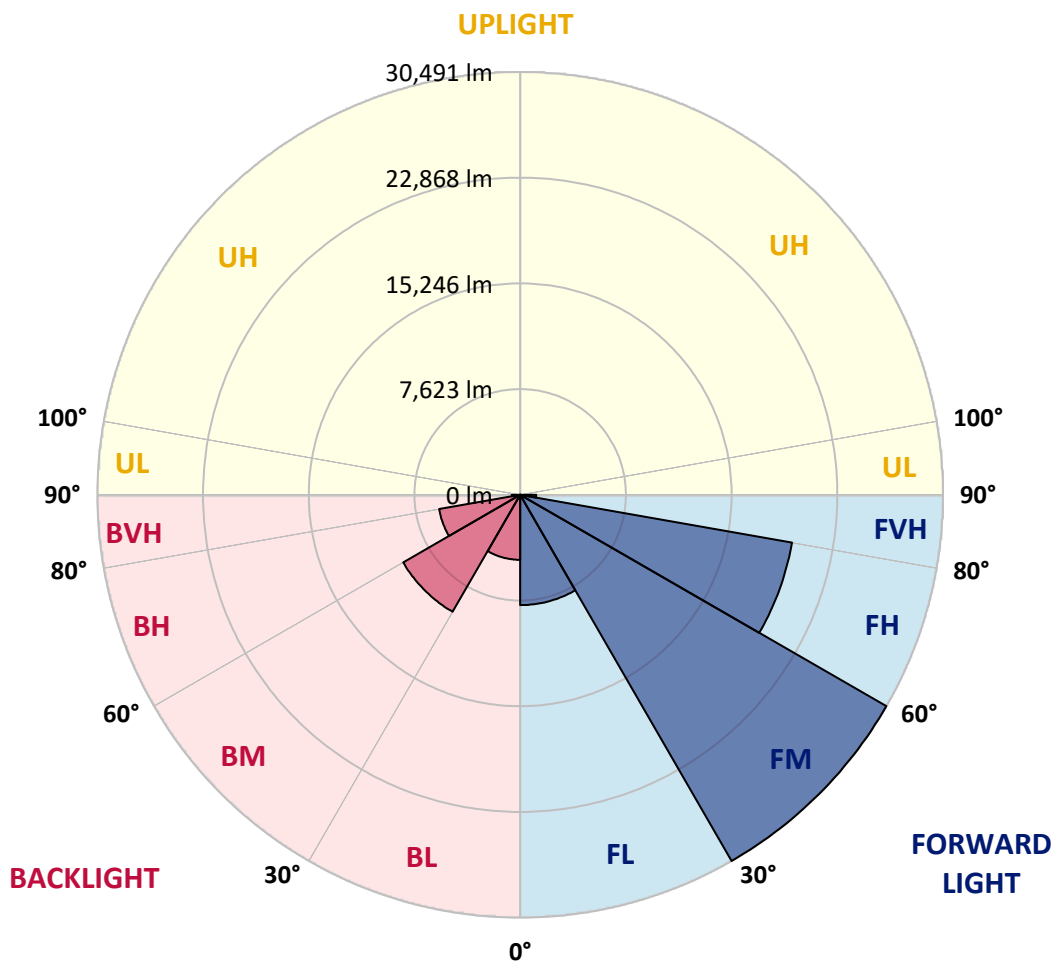
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	7953.1	9.9			
FM	(30°-60°)	30491.1	37.9			
FH	(60°-80°)	19904.4	24.7			G5
FVH	(80°-90°)	1158.1	1.4			G5
BL	(0°-30°)	4688.5	5.8	B4/5000		
BM	(30°-60°)	9737.0	12.1	B5		
BH	(60°-80°)	5933.2	7.4	B5		G5
BVH	(80°-90°)	602.5	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°	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0
2.5°	15110.2	15081.5	15091.0	15105.0	14933.4	14904.7	14762.7	14690.4	14611.2	14555.4	14430.0
5°	15887.9	15885.3	15823.5	15824.3	15555.2	15451.6	15189.4	14996.1	14828.0	14740.9	14479.7
7.5°	16593.3	16520.2	16514.1	16496.7	16192.7	16027.3	15679.8	15386.3	15129.4	14995.2	14590.3
10°	17256.1	17204.7	17205.6	17184.7	16872.9	16666.5	16248.5	15879.2	15536.1	15362.8	14773.2
12.5°	17963.3	17904.9	17895.4	17822.2	17535.7	17337.1	16879.9	16426.1	16010.7	15814.8	15050.1
15°	18688.7	18633.0	18605.1	18520.7	18201.0	17989.4	17606.2	17045.3	16572.4	16328.6	15414.1
17.5°	19357.6	19323.6	19276.6	19211.3	18931.7	18700.1	18316.9	17783.9	17218.7	16906.9	15833.0
20°	19770.4	19740.8	19772.2	19772.2	19611.0	19442.9	19057.1	18599.9	17989.4	17603.6	16314.7
22.5°	20086.5	20056.1	20195.4	20266.0	20282.5	20245.1	19866.2	19467.3	18831.6	18433.6	16910.4
25°	20164.1	20167.5	20403.6	20720.6	20955.7	21065.4	20773.7	20480.2	19931.5	19433.4	17724.7
27.5°	20141.4	20164.1	20466.3	21032.3	21595.8	21862.3	21756.9	21586.2	21151.7	20727.5	18812.4
30°	20108.3	20167.5	20566.4	21262.3	22077.4	22605.2	22710.6	22969.2	22755.9	22466.7	20537.7
32.5°	19697.3	19750.4	20321.7	21347.6	22487.6	23445.6	24012.6	25109.1	25456.5	25399.9	23207.9
35°	18734.9	18839.4	19686.8	21123.8	22803.8	24301.7	25647.3	27943.0	29145.7	29049.0	26288.3
37.5°	17754.3	17882.3	18898.6	20706.6	22946.6	25212.7	27436.1	31111.3	32564.9	32423.8	29248.5
40°	16865.1	17012.3	18038.2	20081.3	22908.3	26064.4	29315.5	34089.0	35609.6	35358.7	31888.2
42.5°	15837.4	16050.8	16985.3	19247.9	22609.6	26664.5	31174.9	36934.2	38311.1	37927.9	34290.1
45°	14880.3	15051.8	15949.7	18106.1	22154.1	27106.0	32875.8	39570.4	40767.9	40321.1	36503.1
47.5°	13843.0	14060.8	14963.0	16931.3	21249.2	27205.3	34433.0	41912.3	43039.2	42574.2	38567.1
50°	11106.6	11457.6	13495.5	15781.7	19844.4	26844.8	35816.0	44108.7	45080.6	44713.1	40702.6
52.5°	9683.6	9752.4	10783.5	14462.2	18134.0	25901.6	36814.0	46263.3	47000.1	46625.6	42592.5
55°	9047.0	9066.1	9527.7	12240.6	16474.9	24104.9	37297.4	48326.5	48880.4	48361.3	44381.3
57.5°	8392.9	8500.0	8964.2	10329.8	14915.1	21512.2	36962.1	50131.0	50461.1	49876.7	46023.8
60°	7852.1	7939.2	8402.5	9330.0	13203.8	18498.0	35399.7	51568.9	51859.8	51263.2	47565.3
62.5°	7361.8	7425.3	7784.1	8653.3	11657.9	15825.2	32483.9	51953.8	52930.1	52455.5	48990.1
65°	6805.2	6863.6	7196.3	7971.4	10526.6	14114.8	29550.7	51521.0	53263.7	52976.3	49631.1
67.5°	6144.2	6222.6	6523.1	7191.1	9361.4	12642.1	26088.0	50422.8	51840.6	51399.1	48249.0
70°	5275.9	5404.0	5744.5	6323.6	8000.1	10744.4	20811.1	46812.9	48497.2	47992.9	44558.1
72.5°	4159.4	4187.3	4433.8	4915.4	6335.8	8547.1	14045.1	39611.4	44010.3	43867.5	39415.4
75°	3101.3	3196.2	3591.6	3962.6	4628.9	6132.0	8537.5	28870.5	37996.7	37996.7	33218.0
77.5°	2530.8	2580.5	2843.5	3155.3	3609.9	4303.1	5427.5	16312.9	26189.8	28846.1	24968.0
80°	1977.8	1960.4	1978.7	2118.9	2548.3	2845.2	3608.2	8384.2	13530.4	15380.2	16355.6
82.5°	1083.4	1084.3	1202.7	1133.9	1405.6	1599.0	2188.6	4715.9	7070.0	7850.3	8762.2
85°	548.7	535.6	596.6	556.5	650.6	729.8	993.7	2342.7	3608.2	3911.2	4129.0
87.5°	196.0	186.4	214.2	256.9	240.4	255.2	343.1	842.2	1394.3	1491.9	1462.2
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°	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0	14363.0
2.5°	14394.3	14310.7	14209.7	14125.2	13946.7	13853.5	13779.5	13800.4	13720.2	13604.4	13602.7
5°	14384.7	14225.4	14008.5	13829.1	13541.7	13393.6	13254.3	13217.7	13098.4	12983.4	12977.4
7.5°	14417.8	14206.2	13854.4	13567.8	13193.3	12962.5	12746.6	12662.1	12521.9	12400.8	12394.7
10°	14509.3	14229.7	13748.1	13351.0	12882.4	12566.3	12286.7	12116.9	11954.9	11830.4	11828.6
12.5°	14673.0	14299.4	13654.9	13136.7	12580.2	12161.3	11804.2	11584.8	11358.3	11266.0	11260.8
15°	14903.8	14401.3	13533.9	12851.9	12208.3	11731.1	11289.5	10999.5	10748.7	10659.9	10679.0
17.5°	15199.9	14567.6	13436.3	12537.5	11798.1	11222.5	10763.5	10471.8	10102.5	10020.6	10043.3
20°	15567.4	14824.5	13415.4	12250.1	11348.8	10663.4	10099.9	9893.5	9425.8	9316.1	9301.3
22.5°	16042.9	15127.6	13406.7	11942.7	10821.9	10020.6	9352.6	9090.5	8697.7	8513.1	8471.3
25°	16631.7	15478.6	13391.9	11635.3	10234.9	9288.2	8475.6	8107.3	7861.7	7582.1	7576.0
27.5°	17406.8	15949.7	13426.7	11330.5	9594.8	8433.8	7534.2	7087.4	6946.3	6765.2	6671.1
30°	18742.7	16789.3	13521.7	10962.1	8894.5	7450.6	6503.0	6164.3	5991.0	5807.2	5775.8
32.5°	20985.3	18606.0	13815.2	10563.2	8115.1	6387.2	5659.1	5304.7	5017.3	4922.4	4897.1
35°	23794.0	20763.2	14569.4	10136.5	7272.1	5545.1	4964.2	4496.5	4222.1	4199.5	4197.8
37.5°	26317.0	23064.2	15552.6	9610.4	6342.8	4944.1	4274.4	3871.2	3664.8	3685.7	3740.5
40°	28757.3	25105.6	16595.1	9086.1	5440.5	4308.4	3604.7	3411.3	3319.0	3393.9	3430.5
42.5°	31049.5	26970.2	17345.8	8374.6	4659.3	3625.6	3143.1	3257.2	3290.3	3352.1	3377.4
45°	33191.9	28880.9	17904.1	7517.6	3956.5	3144.0	3076.9	3273.7	3367.8	3415.7	3413.1
47.5°	35264.7	30707.2	18071.3	6384.6	3413.1	3090.8	3137.9	3250.2	3397.4	3485.4	3479.3
50°	37333.1	32368.9	17931.1	5233.3	3303.3	3193.6	3196.2	3177.9	3349.5	3420.9	3393.9
52.5°	39187.2	33920.9	17138.5	4379.8	3376.5	3301.6	3265.0	3172.7	3221.5	3271.1	3246.7
55°	40854.1	35215.9	15895.8	3959.1	3439.2	3371.3	3420.0	3240.6	3144.0	3102.2	3110.0
57.5°	42405.2	36214.8	14467.5	3697.9	3426.1	3354.7	3481.9	3222.3	3081.3	2905.3	2871.4
60°	43876.2	36870.6	12858.9	3472.3	3364.3	3330.3	3347.8	3223.2	3022.9	2794.7	2739.0
62.5°	44916.0	36905.5	11012.6	3271.1	3245.0	3292.9	3242.4	3198.0	3038.6	2865.3	2830.4
65°	44895.1	35821.2	9186.3	3040.3	3096.1	3192.7	3105.6	2958.5	2717.2	2665.8	2648.4
67.5°	42946.9	33077.0	7414.9	2698.1	2854.8	3057.7	2909.7	2670.2	2462.0	2401.1	2412.4
70°	38710.8	29197.1	5476.2	2186.8	2492.5	2827.8	2735.5	2469.0	2240.8	2192.9	2244.3
72.5°	33690.1	25081.2	3892.9	1734.0	2070.1	2502.1	2465.5	2235.6	2035.3	2055.3	2101.5
75°	28126.7	19965.5	2855.7	1491.9	1625.1	2132.8	2225.2	2078.0	1950.8	2014.4	2012.7
77.5°	20962.7	14744.4	2174.6	1251.5	1345.5	1659.9	1961.3	1905.5	2252.2	2737.3	2752.9
80°	13775.1	9573.0	1467.5	1027.7	1100.8	1245.4	1600.7	1835.9	2306.2	1998.7	1974.3
82.5°	7632.6	5080.9	910.1	799.5	826.5	903.1	1160.0	1916.9	1693.9	1572.0	1578.1
85°	3384.3	1967.4	537.3	536.5	538.2	547.8	744.6	1453.5	1191.4	1153.9	1173.1
87.5°	1172.2	518.2	169.0	134.1	151.5	189.9	387.6	886.6	621.8	515.6	517.3
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)