

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: P232730

Luminaire Tested: **CTN-8-4-D-E1-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232730
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-20)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-8-4-D-E1-T4-7050
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 70 CRI, 5000K LEDS AND TYPE IV OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43060 lumens
Efficiency: N/A
Efficacy: 132.5 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B4 - U0 - G5

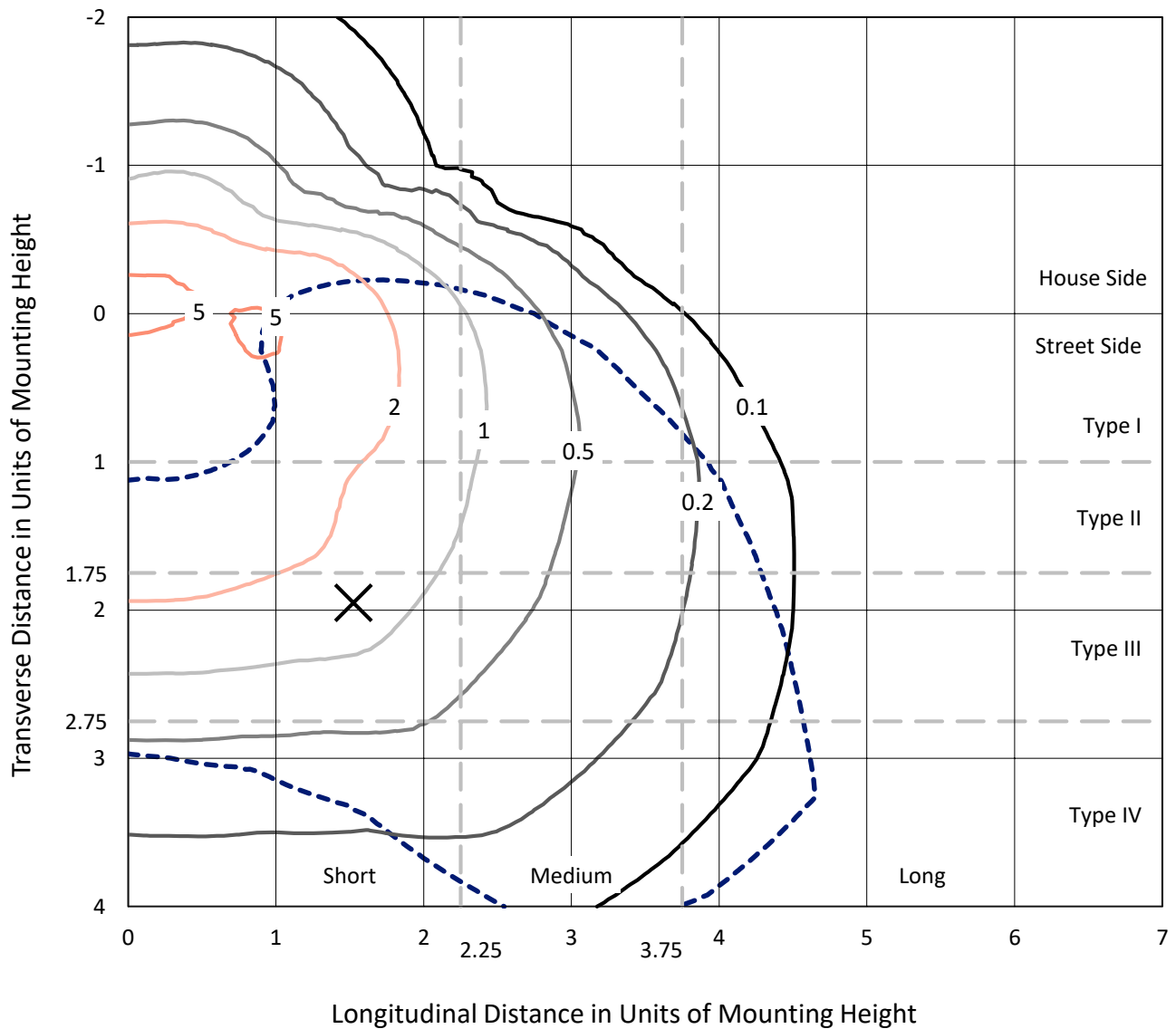
Input Watts (W): 325
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

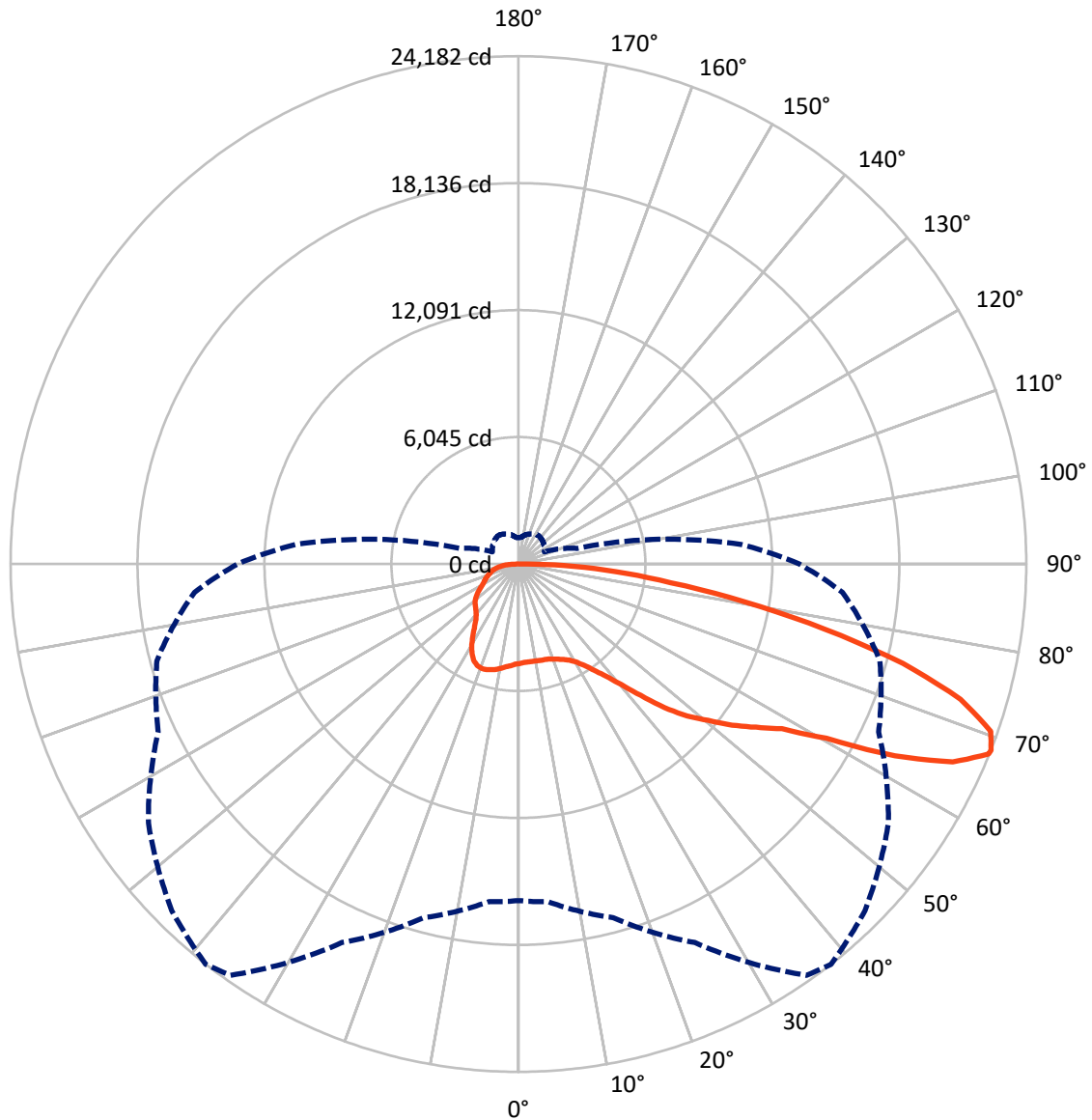
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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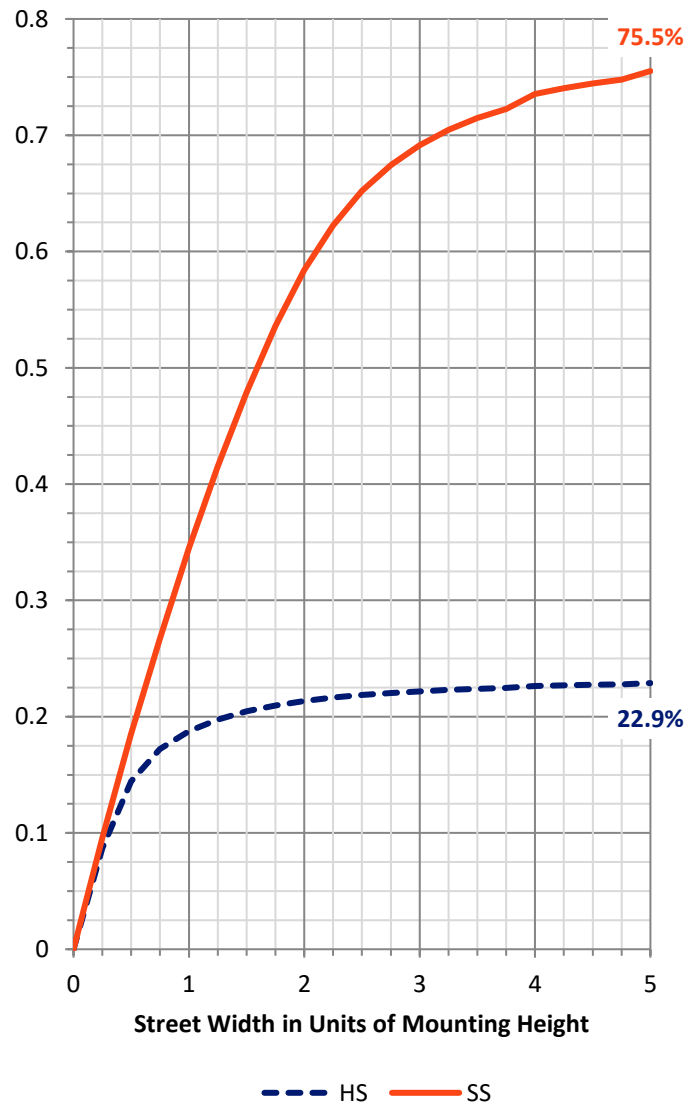
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10049.3	0.0	10049.3
	% Fixture	23.3	0.0	23.3
Street Side	Lumens	33010.7	0.0	33010.7
	% Fixture	76.7	0.0	76.7
Total	Lumens	43060.0	0.0	43060.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	458.8	1.1
10°-20°	1416.1	3.3
20°-30°	2405.9	5.6
30°-40°	3643.4	8.5
40°-50°	6026.1	14.0
50°-60°	8680.3	20.2
60°-70°	10947.1	25.4
70°-80°	7791.2	18.1
80°-90°	1691.1	3.9
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°	43060.0	100.0
0°-180°	43060.0	100.0



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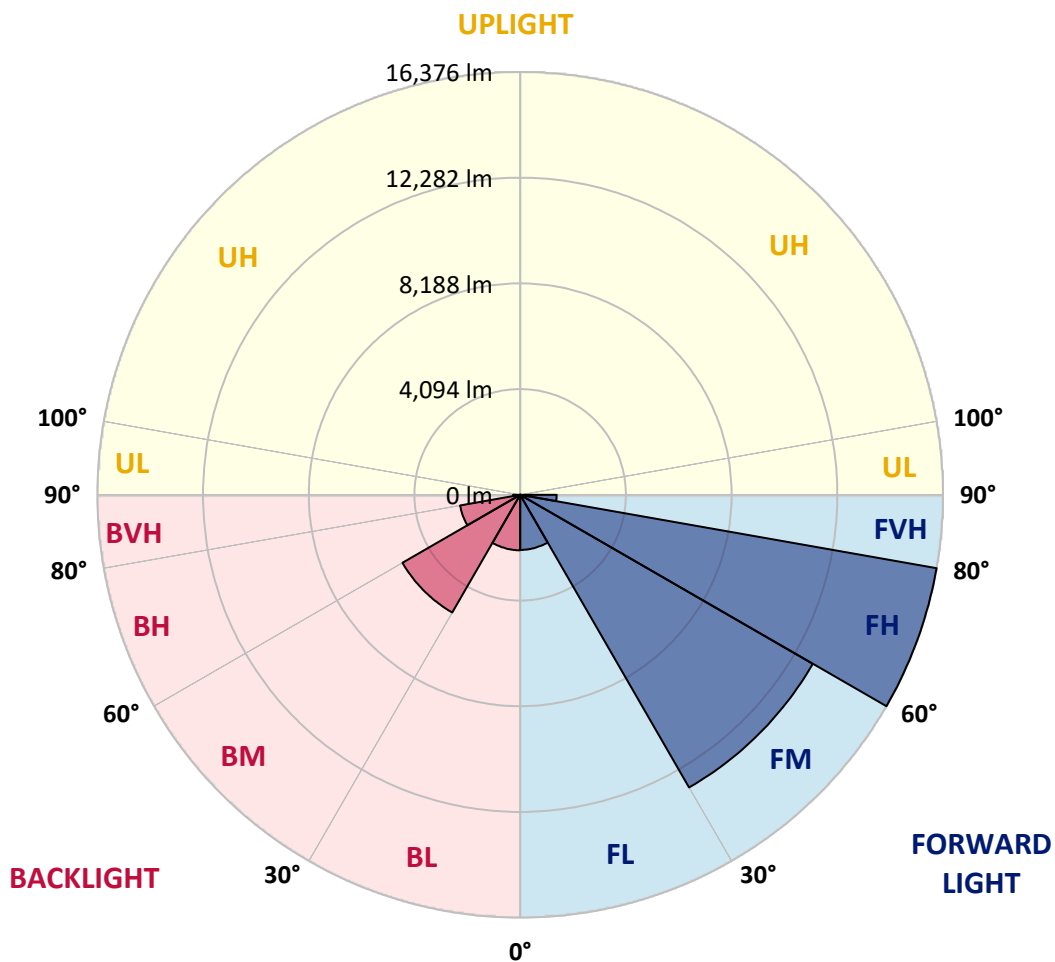
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2133.4	5.0			
FM	(30°-60°)	13087.3	30.4			
FH	(60°-80°)	16376.4	38.0			G5
FVH	(80°-90°)	1413.6	3.3			G5
BL	(0°-30°)	2147.4	5.0	B3/2500		
BM	(30°-60°)	5262.5	12.2	B4/8500		
BH	(60°-80°)	2361.9	5.5	B3/2500		G3/2500
BVH	(80°-90°)	277.5	0.6			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7
2.5°	4726.9	4735.3	4729.7	4726.9	4690.5	4698.9	4712.9	4693.3	4740.9	4738.1	4766.1
5°	4682.1	4686.3	4687.7	4700.3	4665.4	4683.5	4700.3	4687.7	4738.1	4724.1	4763.3
7.5°	4669.6	4668.2	4669.6	4693.3	4655.6	4683.5	4703.1	4698.9	4753.5	4742.3	4789.9
10°	4637.4	4638.8	4643.0	4669.6	4650.0	4687.7	4722.7	4740.9	4813.6	4803.9	4858.4
12.5°	4581.4	4592.6	4608.0	4652.8	4657.0	4707.3	4759.1	4795.5	4890.6	4899.0	4967.5
15°	4532.5	4552.0	4578.6	4638.8	4664.0	4721.3	4787.1	4854.2	4978.7	5016.5	5103.2
17.5°	4547.9	4577.2	4612.2	4673.8	4691.9	4752.1	4826.2	4915.8	5069.6	5150.8	5262.7
20°	4643.0	4662.6	4691.9	4749.3	4773.1	4833.2	4893.4	4981.5	5181.6	5313.1	5451.5
22.5°	4761.9	4789.9	4809.4	4844.4	4872.4	4925.6	4988.5	5075.2	5311.7	5476.7	5667.0
25°	4889.2	4903.2	4931.2	4954.9	4989.9	5031.9	5103.2	5209.5	5459.9	5662.8	5928.6
27.5°	5006.7	5013.7	5066.8	5086.4	5155.0	5185.8	5241.7	5383.0	5653.0	5903.4	6230.7
30°	5178.8	5192.7	5233.3	5279.5	5380.2	5411.0	5468.3	5616.6	5910.4	6230.7	6623.8
32.5°	5504.7	5541.1	5535.5	5584.4	5703.4	5743.9	5822.3	6015.3	6335.7	6703.6	7170.8
35°	6165.0	6216.8	6152.4	6086.7	6149.6	6204.2	6324.5	6607.0	7002.9	7610.1	8071.7
37.5°	7246.3	7298.1	7068.7	6858.8	6721.8	6765.1	6928.8	7328.9	7934.6	8989.4	9504.2
40°	8509.6	8565.5	8246.6	7868.9	7559.7	7542.9	7593.3	8102.5	8976.8	10524.0	10925.5
42.5°	9610.5	9757.4	9340.5	9014.6	8614.5	8547.3	8425.6	8940.4	10079.1	11945.3	12171.9
45°	10680.7	10823.4	10494.6	10269.4	9860.9	9751.8	9521.0	9832.9	11160.5	13188.9	13198.7
47.5°	11662.7	11777.4	11395.5	11251.4	10848.5	10801.0	10564.6	10782.8	12162.1	14242.3	14043.6
50°	12760.8	12881.2	12272.6	12095.0	11770.4	11706.1	11629.1	11785.8	13310.6	15150.2	14761.3
52.5°	14103.8	14059.0	13307.8	12900.7	12728.7	12744.1	12657.3	12830.8	14529.1	15919.6	15326.4
55°	15711.1	15481.7	14656.4	14039.4	13643.6	13719.1	13605.8	13860.4	15733.5	16568.7	15734.9
57.5°	16624.6	16687.6	16609.2	15816.1	14808.8	14797.7	14618.6	14863.4	16785.5	17098.9	15983.9
60°	17956.4	18216.6	18315.9	18101.9	17198.2	16841.5	15944.8	15888.8	17673.8	17556.3	16111.2
62.5°	18798.5	18920.2	19517.6	19776.4	20067.3	20128.9	18704.8	17124.0	18329.9	17789.9	16164.4
65°	18395.6	18518.8	19635.1	20649.3	22375.5	22722.5	22269.2	19081.1	18773.4	17841.7	15986.7
67.5°	16330.9	16481.9	17980.2	20059.0	23771.7	24145.2	23413.5	21337.6	18918.8	17810.9	15600.6
68°	16028.7	16140.6	17433.2	19886.9	23911.5	24181.5	23338.0	21508.2	18927.2	17820.7	15481.7
70°	13706.5	13903.8	15264.9	18321.5	23686.3	23858.4	22866.6	21413.1	18737.0	17661.2	14611.6
72.5°	10683.5	10956.3	11991.4	15217.3	21877.5	22017.4	21186.5	20363.9	18162.0	16554.7	12524.4
75°	7740.2	7973.8	8969.8	11743.8	18418.0	18914.6	18774.8	18923.0	16280.5	14026.9	9070.5
77.5°	5345.2	5545.3	6474.1	8762.8	14281.5	14909.6	15635.6	16020.3	13377.8	10406.5	4311.4
80°	3424.5	3578.4	4368.8	6170.6	10298.8	10889.1	11671.1	12069.8	9515.4	5234.7	765.2
82.5°	2013.0	2117.9	2657.9	3981.3	6941.4	7300.9	7678.6	7009.9	3819.0	1001.6	482.6
85°	1000.2	1070.2	1401.7	2252.2	4315.6	4645.8	4771.7	2990.9	807.2	366.5	328.7
87.5°	447.7	467.2	601.5	1014.2	2050.8	2161.3	2108.2	930.3	162.3	137.1	117.5
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°	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7	4743.7
2.5°	4768.9	4757.7	4754.9	4773.1	4753.5	4777.3	4770.3	4823.4	4830.4	4810.8	4843.0
5°	4775.9	4770.3	4774.5	4808.0	4801.1	4850.0	4862.6	4915.8	4915.8	4900.4	4934.0
7.5°	4808.0	4808.0	4820.6	4882.2	4882.2	4924.2	4938.1	4996.9	4995.5	4995.5	5026.3
10°	4889.2	4889.2	4915.8	4994.1	4974.5	5029.1	5036.1	5066.8	5059.9	5061.3	5093.4
12.5°	5009.5	5016.5	5062.7	5131.2	5118.6	5138.2	5124.2	5118.6	5068.2	5068.2	5089.2
15°	5148.0	5177.4	5240.3	5303.3	5261.3	5254.3	5174.6	5104.6	4996.9	4950.7	4974.5
17.5°	5328.4	5378.8	5451.5	5496.3	5416.6	5359.2	5215.1	5033.3	4858.4	4756.3	4759.1
20°	5528.5	5595.6	5685.2	5700.6	5583.0	5440.4	5199.7	4914.4	4613.6	4451.3	4440.1
22.5°	5750.9	5834.8	5938.4	5878.2	5686.6	5454.3	5110.2	4731.1	4326.8	4054.0	4049.8
25°	6022.3	6113.2	6179.0	6011.1	5710.3	5383.0	4954.9	4445.7	3946.3	3652.6	3633.0
27.5°	6367.8	6428.0	6379.0	6079.7	5639.0	5212.3	4691.9	4079.2	3550.4	3284.6	3255.3
30°	6777.7	6770.7	6504.9	6060.1	5494.9	4942.3	4333.8	3681.9	3225.9	2997.9	2971.3
32.5°	7275.7	7175.0	6626.6	5966.3	5262.7	4588.4	3908.6	3351.8	2990.9	2760.0	2732.1
35°	8070.3	7786.3	6784.7	5825.1	4939.5	4161.8	3507.1	3097.2	2809.0	2544.6	2490.1
37.5°	9302.7	8704.0	7047.7	5676.8	4568.8	3743.5	3207.7	2912.5	2666.3	2367.0	2302.6
40°	10570.2	9770.0	7447.8	5517.3	4221.9	3427.3	3038.4	2825.8	2579.6	2291.4	2227.1
42.5°	11671.1	10764.6	7927.6	5317.3	3866.6	3178.3	2951.7	2797.8	2551.6	2277.4	2215.9
45°	12643.3	11658.5	8428.4	5085.0	3494.5	2976.9	2877.6	2758.6	2509.6	2245.2	2189.3
47.5°	13453.3	12370.5	8869.1	4827.6	3129.4	2828.6	2804.8	2666.3	2429.9	2175.3	2127.7
50°	14080.0	12877.0	9164.3	4540.9	2817.4	2712.5	2699.9	2525.0	2295.6	2052.2	2004.6
52.5°	14524.9	13216.9	9336.3	4433.1	2572.6	2578.2	2557.2	2371.2	2148.7	1906.7	1868.9
55°	14807.4	13450.5	9294.3	4294.6	2325.0	2389.3	2392.1	2257.8	2062.0	1827.0	1796.2
57.5°	14915.2	13440.7	9046.7	3600.8	2084.4	2162.7	2200.5	2179.5	2006.0	1776.6	1751.4
60°	14856.4	13282.6	8519.4	2638.3	1835.4	1941.7	2034.0	2029.8	1882.9	1666.1	1639.5
62.5°	14758.5	12916.1	7485.6	1888.5	1647.9	1785.0	1896.9	1859.1	1719.3	1529.0	1510.8
65°	14407.4	12269.8	5787.3	1510.8	1569.6	1696.9	1789.2	1724.9	1587.8	1389.1	1379.3
67.5°	13631.0	10977.2	3378.4	1377.9	1512.2	1622.7	1688.5	1608.7	1481.4	1288.4	1271.6
68°	13368.0	10645.7	2873.4	1365.3	1501.0	1604.5	1664.7	1580.8	1456.3	1268.8	1252.0
70°	12040.4	8628.5	1370.9	1313.6	1452.1	1520.6	1555.6	1478.6	1356.9	1190.5	1179.3
72.5°	9371.3	5205.3	916.3	1235.2	1356.9	1422.7	1431.1	1310.8	1196.1	1073.0	1066.0
75°	5536.9	1727.7	851.9	1119.1	1225.4	1316.4	1340.2	1219.8	1092.5	949.9	947.1
77.5°	1348.5	670.1	804.4	998.8	1110.7	1198.9	1217.1	1128.9	1017.0	856.1	850.5
80°	555.4	556.8	749.8	828.2	952.7	1038.0	1064.6	986.2	885.5	782.0	770.8
82.5°	461.6	470.0	636.5	611.3	762.4	861.7	888.3	833.7	798.8	686.9	675.7
85°	328.7	416.9	422.5	411.3	534.4	614.1	748.4	721.8	684.1	588.9	533.0
87.5°	153.9	243.4	183.3	176.3	271.4	363.7	428.1	449.0	388.9	302.2	279.8
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)