

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: P232722

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232722
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
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 70 CRI, 4000K LEDS AND TYPE IV OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42627 lumens
Efficiency: N/A
Efficacy: 131.2 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B4 - U0 - G5

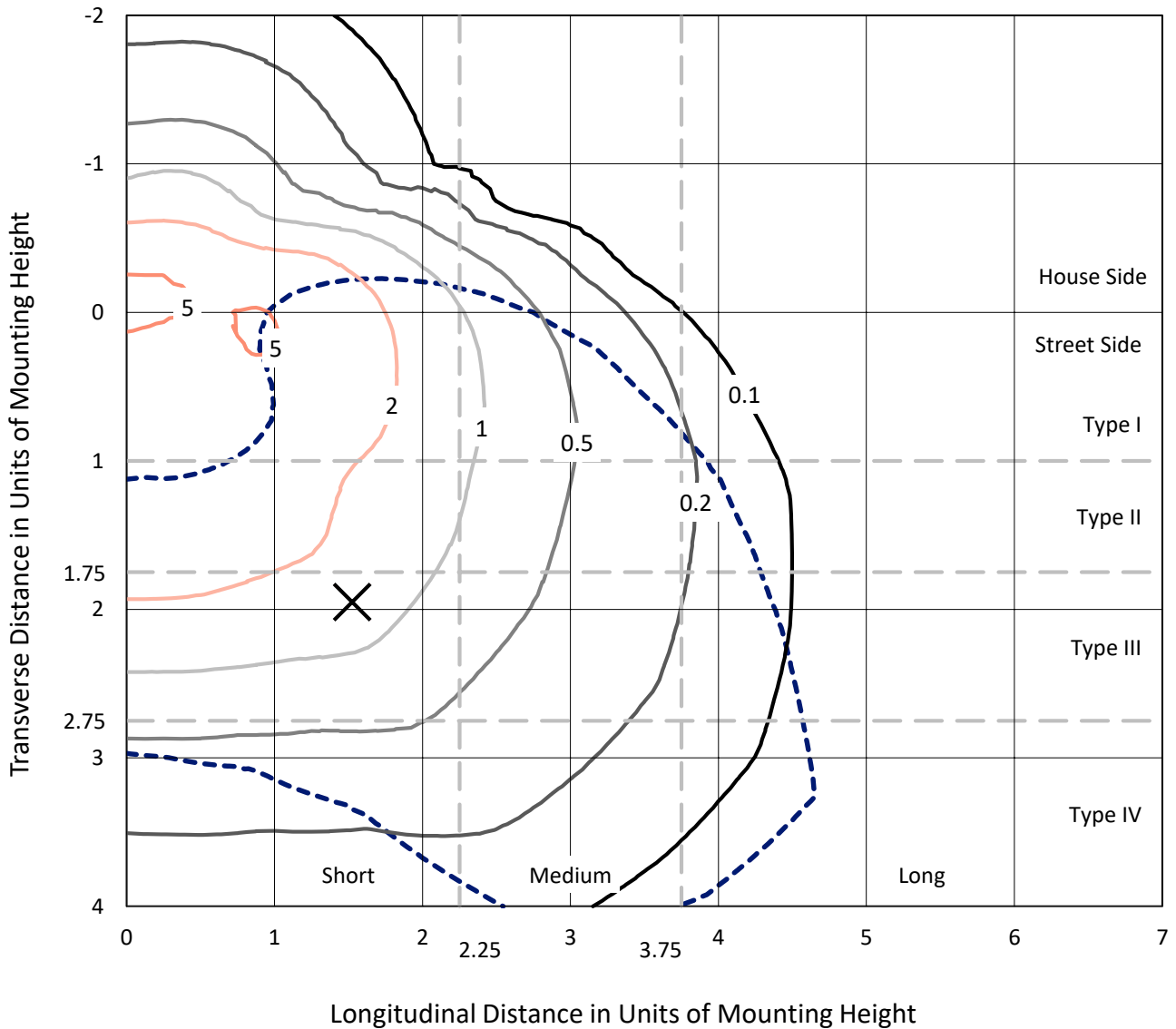
Input Watts (W): 325
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

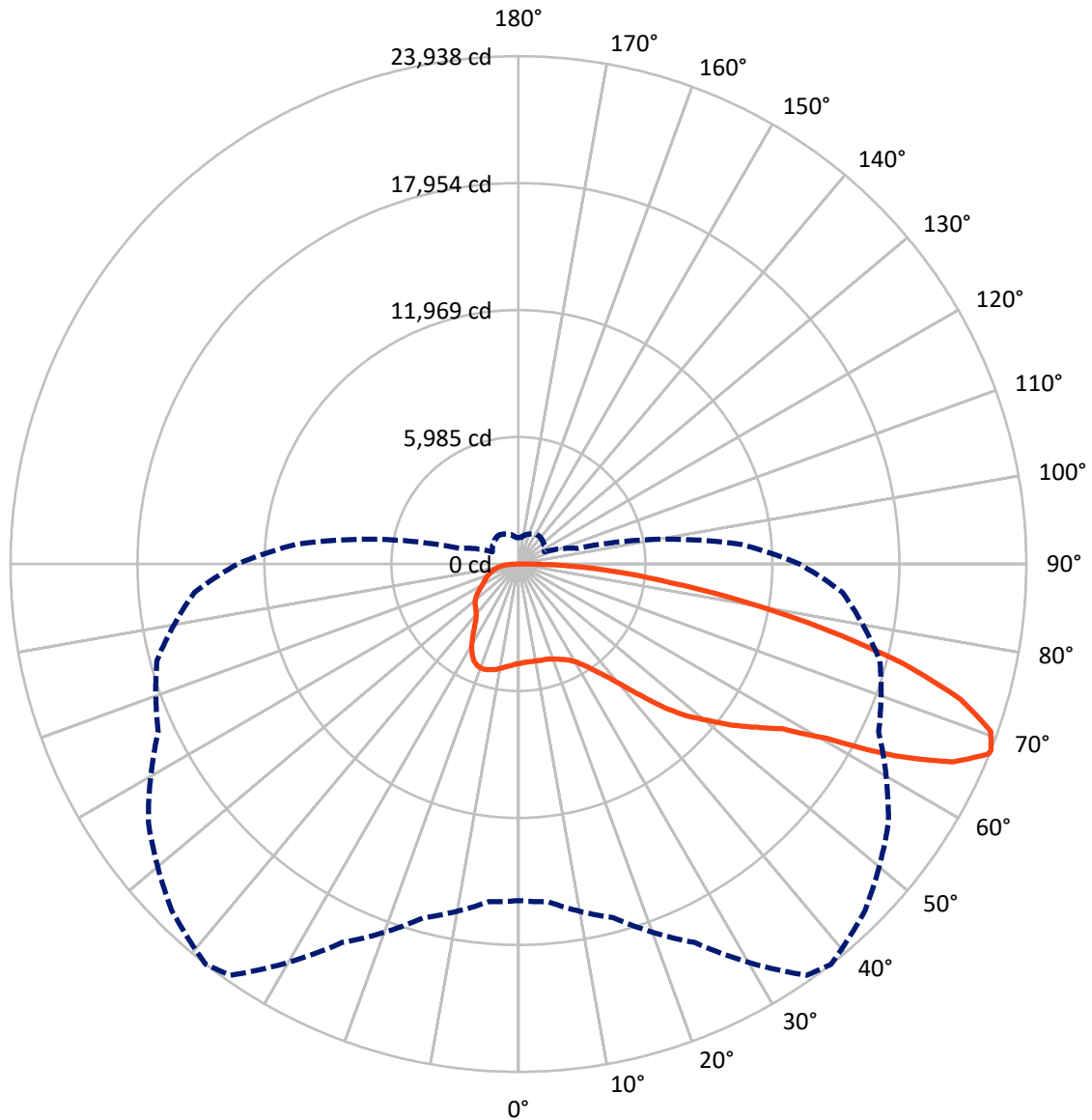
✕ Max cd
 - - - 1/2 Max cd



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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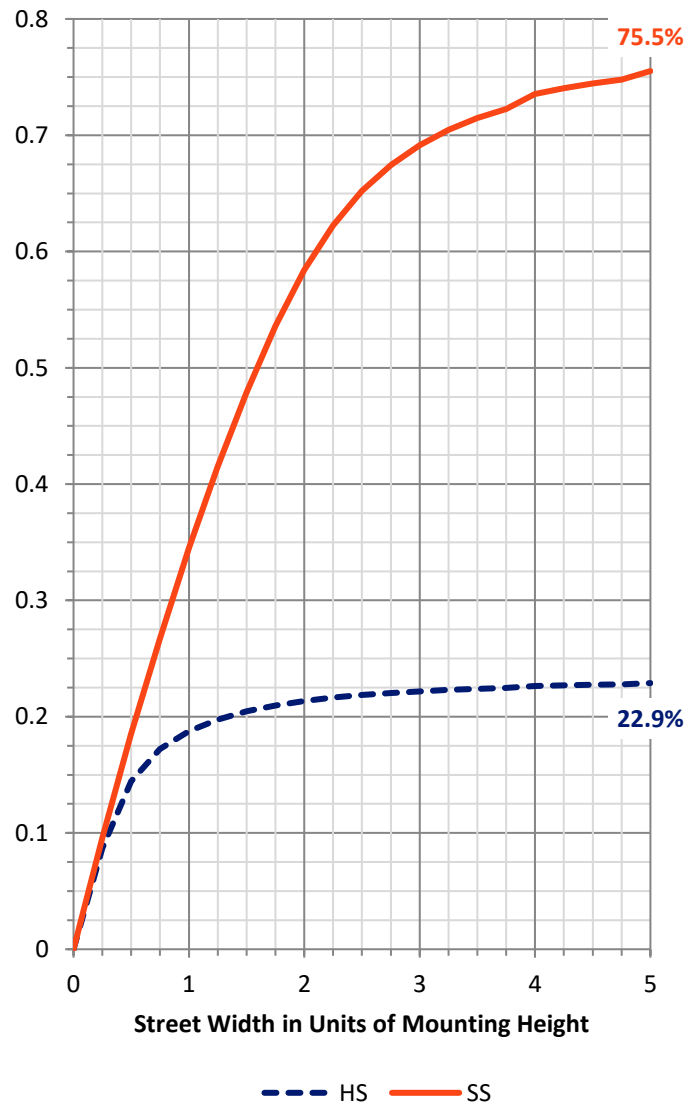
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9948.2	0.0	9948.2
	% Fixture	23.3	0.0	23.3
Street Side	Lumens	32678.8	0.0	32678.8
	% Fixture	76.7	0.0	76.7
Total	Lumens	42627.0	0.0	42627.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	454.1	1.1
10°-20°	1401.9	3.3
20°-30°	2381.7	5.6
30°-40°	3606.7	8.5
40°-50°	5965.5	14.0
50°-60°	8593.0	20.2
60°-70°	10837.0	25.4
70°-80°	7712.9	18.1
80°-90°	1674.1	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°	42627.0	100.0
0°-180°	42627.0	100.0



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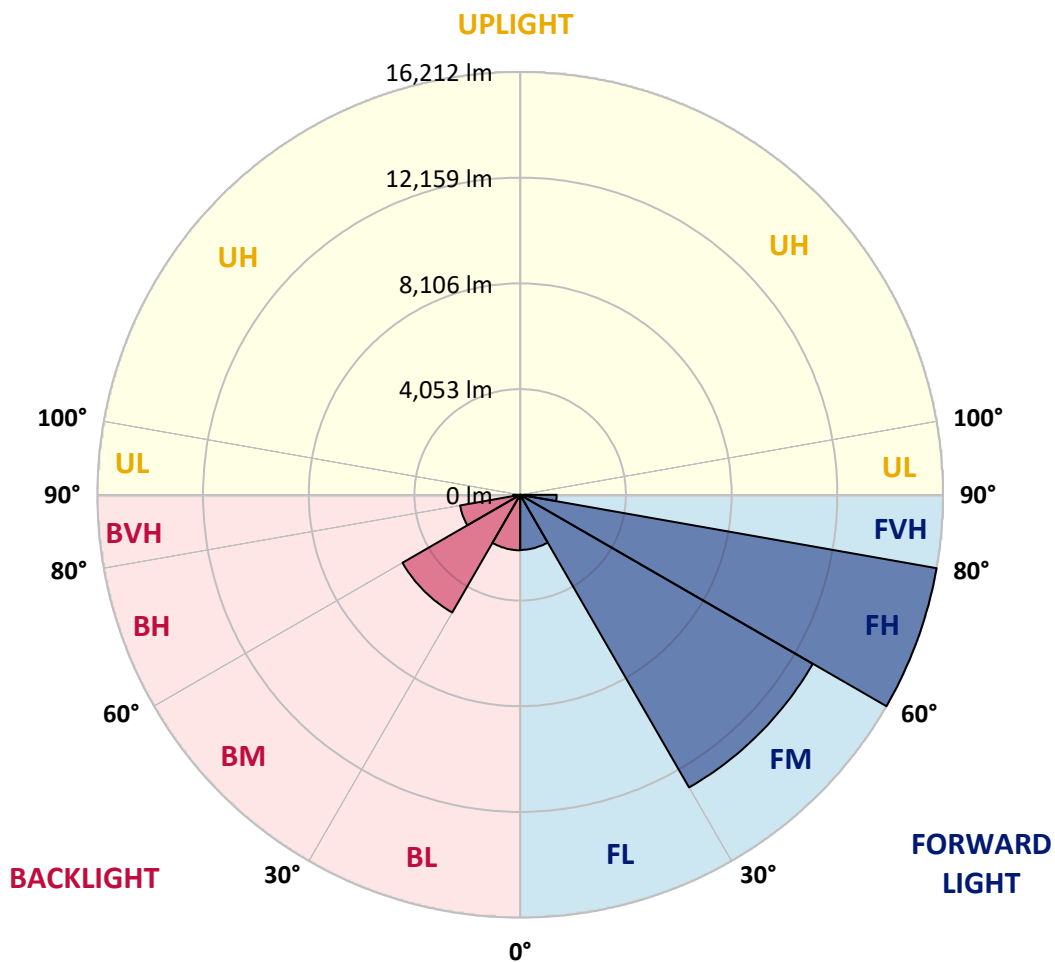
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2112.0	5.0			
FM	(30°-60°)	12955.7	30.4			
FH	(60°-80°)	16211.7	38.0			G5
FVH	(80°-90°)	1399.4	3.3			G5
BL	(0°-30°)	2125.8	5.0	B3/2500		
BM	(30°-60°)	5209.5	12.2	B4/8500		
BH	(60°-80°)	2338.2	5.5	B3/2500		G3/2500
BVH	(80°-90°)	274.7	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°	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0
2.5°	4679.4	4687.7	4682.1	4679.4	4643.4	4651.7	4665.5	4646.1	4693.2	4690.5	4718.2
5°	4635.1	4639.2	4640.6	4653.1	4618.4	4636.4	4653.1	4640.6	4690.5	4676.6	4715.4
7.5°	4622.6	4621.2	4622.6	4646.1	4608.8	4636.4	4655.8	4651.7	4705.7	4694.6	4741.7
10°	4590.7	4592.1	4596.3	4622.6	4603.2	4640.6	4675.2	4693.2	4765.2	4755.5	4809.6
12.5°	4535.4	4546.4	4561.7	4606.0	4610.1	4660.0	4711.2	4747.2	4841.4	4849.7	4917.6
15°	4486.9	4506.3	4532.6	4592.1	4617.1	4673.8	4738.9	4805.4	4928.7	4966.0	5051.9
17.5°	4502.1	4531.2	4565.8	4626.8	4644.8	4704.3	4777.7	4866.3	5018.7	5099.0	5209.8
20°	4596.3	4615.7	4644.8	4701.5	4725.1	4784.6	4844.2	4931.4	5129.5	5259.6	5396.7
22.5°	4714.0	4741.7	4761.1	4795.7	4823.4	4876.0	4938.3	5024.2	5258.2	5421.7	5610.0
25°	4840.0	4853.9	4881.6	4905.1	4939.7	4981.3	5051.9	5157.2	5405.0	5605.8	5869.0
27.5°	4956.3	4963.3	5015.9	5035.3	5103.1	5133.6	5189.0	5328.9	5596.1	5844.0	6168.1
30°	5126.7	5140.5	5180.7	5226.4	5326.1	5356.6	5413.3	5560.1	5851.0	6168.1	6557.2
32.5°	5449.4	5485.4	5479.8	5528.3	5646.0	5686.2	5763.7	5954.8	6271.9	6636.2	7098.7
35°	6103.0	6154.2	6090.5	6025.4	6087.8	6141.8	6260.9	6540.6	6932.5	7533.5	7990.5
37.5°	7173.5	7224.7	6997.6	6789.9	6654.2	6697.1	6859.1	7255.2	7854.8	8899.0	9408.6
40°	8424.0	8479.4	8163.6	7789.7	7483.7	7467.1	7516.9	8021.0	8886.5	10418.2	10815.6
42.5°	9513.9	9659.3	9246.6	8923.9	8527.9	8461.4	8340.9	8850.5	9977.8	11825.2	12049.5
45°	10573.3	10714.5	10389.1	10166.1	9761.7	9653.7	9425.2	9734.1	11048.3	13056.3	13066.0
47.5°	11545.4	11659.0	11280.9	11138.3	10739.4	10692.4	10458.3	10674.4	12039.8	14099.1	13902.4
50°	12632.5	12751.6	12149.2	11973.3	11652.1	11588.4	11512.2	11667.3	13176.8	14997.8	14612.8
52.5°	13962.0	13917.7	13174.0	12771.0	12600.7	12615.9	12530.0	12701.8	14383.0	15759.5	15172.3
55°	15553.2	15326.0	14509.0	13898.3	13506.4	13581.1	13469.0	13721.0	15575.3	16402.1	15576.7
57.5°	16457.5	16519.8	16442.2	15657.0	14659.9	14648.9	14471.6	14713.9	16616.7	16926.9	15823.2
60°	17775.8	18033.4	18131.7	17919.9	17025.2	16672.1	15784.4	15729.0	17496.1	17379.8	15949.2
62.5°	18609.5	18730.0	19321.3	19577.5	19865.6	19926.5	18516.7	16951.8	18145.6	17611.0	16001.8
65°	18210.7	18332.5	19437.6	20441.6	22150.5	22494.0	22045.3	18889.2	18584.6	17662.3	15826.0
67.5°	16166.6	16316.2	17799.4	19857.2	23532.6	23902.4	23178.1	21123.0	18728.6	17631.8	15443.8
68°	15867.5	15978.3	17257.9	19686.9	23671.1	23938.4	23103.3	21291.9	18736.9	17641.5	15326.0
70°	13568.7	13763.9	15111.4	18137.3	23448.1	23618.5	22636.6	21197.8	18548.6	17483.6	14464.7
72.5°	10576.0	10846.1	11870.9	15064.3	21657.5	21796.0	20973.4	20159.1	17979.4	16388.2	12398.5
75°	7662.3	7893.6	8879.6	11625.7	18232.8	18724.4	18586.0	18732.8	16116.8	13885.8	8979.3
77.5°	5291.5	5489.5	6409.0	8674.6	14137.8	14759.6	15478.4	15859.2	13243.2	10301.8	4268.1
80°	3390.1	3542.4	4324.9	6108.5	10195.2	10779.6	11553.7	11948.4	9419.7	5182.1	757.5
82.5°	1992.8	2096.7	2631.2	3941.3	6871.6	7227.5	7601.4	6939.4	3780.6	991.5	477.8
85°	990.2	1059.4	1387.6	2229.6	4272.2	4599.1	4723.7	2960.8	799.1	362.8	325.4
87.5°	443.1	462.5	595.5	1004.0	2030.2	2139.6	2087.0	920.9	160.6	135.7	116.3
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°	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0	4696.0
2.5°	4720.9	4709.8	4707.1	4725.1	4705.7	4729.2	4722.3	4774.9	4781.9	4762.5	4794.3
5°	4727.8	4722.3	4726.5	4759.7	4752.8	4801.2	4813.7	4866.3	4866.3	4851.1	4884.3
7.5°	4759.7	4759.7	4772.2	4833.1	4833.1	4874.6	4888.5	4946.7	4945.3	4945.3	4975.7
10°	4840.0	4840.0	4866.3	4943.9	4924.5	4978.5	4985.4	5015.9	5009.0	5010.4	5042.2
12.5°	4959.1	4966.0	5011.7	5079.6	5067.1	5086.5	5072.7	5067.1	5017.3	5017.3	5038.1
15°	5096.2	5125.3	5187.6	5249.9	5208.4	5201.5	5122.5	5053.3	4946.7	4901.0	4924.5
17.5°	5274.9	5324.7	5396.7	5441.0	5362.1	5305.3	5162.7	4982.7	4809.6	4708.5	4711.2
20°	5472.9	5539.4	5628.0	5643.2	5526.9	5385.6	5147.5	4864.9	4567.2	4406.6	4395.5
22.5°	5693.1	5776.2	5878.7	5819.1	5629.4	5399.5	5058.8	4683.5	4283.3	4013.3	4009.1
25°	5961.7	6051.8	6116.8	5950.7	5652.9	5328.9	4905.1	4401.0	3906.6	3615.8	3596.4
27.5°	6303.8	6363.3	6314.9	6018.5	5582.3	5159.9	4644.8	4038.2	3514.7	3251.6	3222.5
30°	6709.6	6702.6	6439.5	5999.1	5439.7	4892.6	4290.2	3644.9	3193.4	2967.7	2941.4
32.5°	7202.6	7102.9	6560.0	5906.3	5209.8	4542.3	3869.2	3318.1	2960.8	2732.3	2704.6
35°	7989.2	7708.0	6716.5	5766.5	4889.9	4119.9	3471.8	3066.0	2780.8	2519.0	2465.0
37.5°	9209.2	8616.5	6976.8	5619.7	4522.9	3705.8	3175.4	2883.2	2639.5	2343.2	2279.4
40°	10463.9	9671.7	7372.9	5461.8	4179.5	3392.9	3007.9	2797.4	2553.6	2268.4	2204.7
42.5°	11553.7	10656.4	7847.9	5263.8	3827.7	3146.4	2922.0	2769.7	2526.0	2254.5	2193.6
45°	12516.2	11541.3	8343.7	5033.9	3459.3	2946.9	2848.6	2730.9	2484.4	2222.7	2167.3
47.5°	13318.0	12246.2	8779.9	4779.1	3097.9	2800.1	2776.6	2639.5	2405.5	2153.4	2106.3
50°	13938.4	12747.5	9072.1	4495.2	2789.1	2685.2	2672.7	2499.6	2272.5	2031.6	1984.5
52.5°	14378.8	13084.0	9242.4	4388.6	2546.7	2552.3	2531.5	2347.3	2127.1	1887.5	1850.1
55°	14658.5	13315.3	9200.9	4251.5	2301.6	2365.3	2368.1	2235.1	2041.3	1808.6	1778.1
57.5°	14765.2	13305.6	8955.8	3564.6	2063.4	2141.0	2178.4	2157.6	1985.9	1758.7	1733.8
60°	14707.0	13149.1	8433.7	2611.8	1816.9	1922.2	2013.6	2009.4	1864.0	1649.3	1623.0
62.5°	14610.1	12786.2	7410.3	1869.5	1631.3	1767.1	1877.8	1840.5	1702.0	1513.6	1495.6
65°	14262.5	12146.4	5729.1	1495.6	1553.8	1679.8	1771.2	1707.5	1571.8	1375.1	1365.5
67.5°	13493.9	10866.9	3344.4	1364.1	1497.0	1606.4	1671.5	1592.6	1466.5	1275.4	1258.8
68°	13233.5	10538.6	2844.5	1351.6	1485.9	1588.4	1648.0	1564.9	1441.6	1256.1	1239.4
70°	11919.3	8541.7	1357.1	1300.4	1437.5	1505.3	1539.9	1463.8	1343.3	1178.5	1167.4
72.5°	9277.1	5153.0	907.1	1222.8	1343.3	1408.4	1416.7	1297.6	1184.0	1062.2	1055.2
75°	5481.2	1710.3	843.4	1107.9	1213.1	1303.1	1326.7	1207.6	1081.6	940.3	937.5
77.5°	1335.0	663.3	796.3	988.8	1099.6	1186.8	1204.8	1117.6	1006.8	847.5	842.0
80°	549.8	551.2	742.3	819.8	943.1	1027.6	1053.9	976.3	876.6	774.1	763.0
82.5°	457.0	465.3	630.1	605.2	754.7	853.1	879.4	825.4	790.7	680.0	668.9
85°	325.4	412.7	418.2	407.1	529.0	607.9	740.9	714.6	677.2	583.0	527.6
87.5°	152.3	241.0	181.4	174.5	268.7	360.1	423.8	444.5	385.0	299.1	277.0
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)