

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: P591213

Luminaire Tested: **CTN-CA10-310-727-U-T4-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591213
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-12)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA10-310-727-U-T4-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (10) 2700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18039 lumens
Efficiency: N/A
Efficacy: 57.7 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

Input Watts (W): 312.4
Input Voltage (V): 120
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: 24 FT

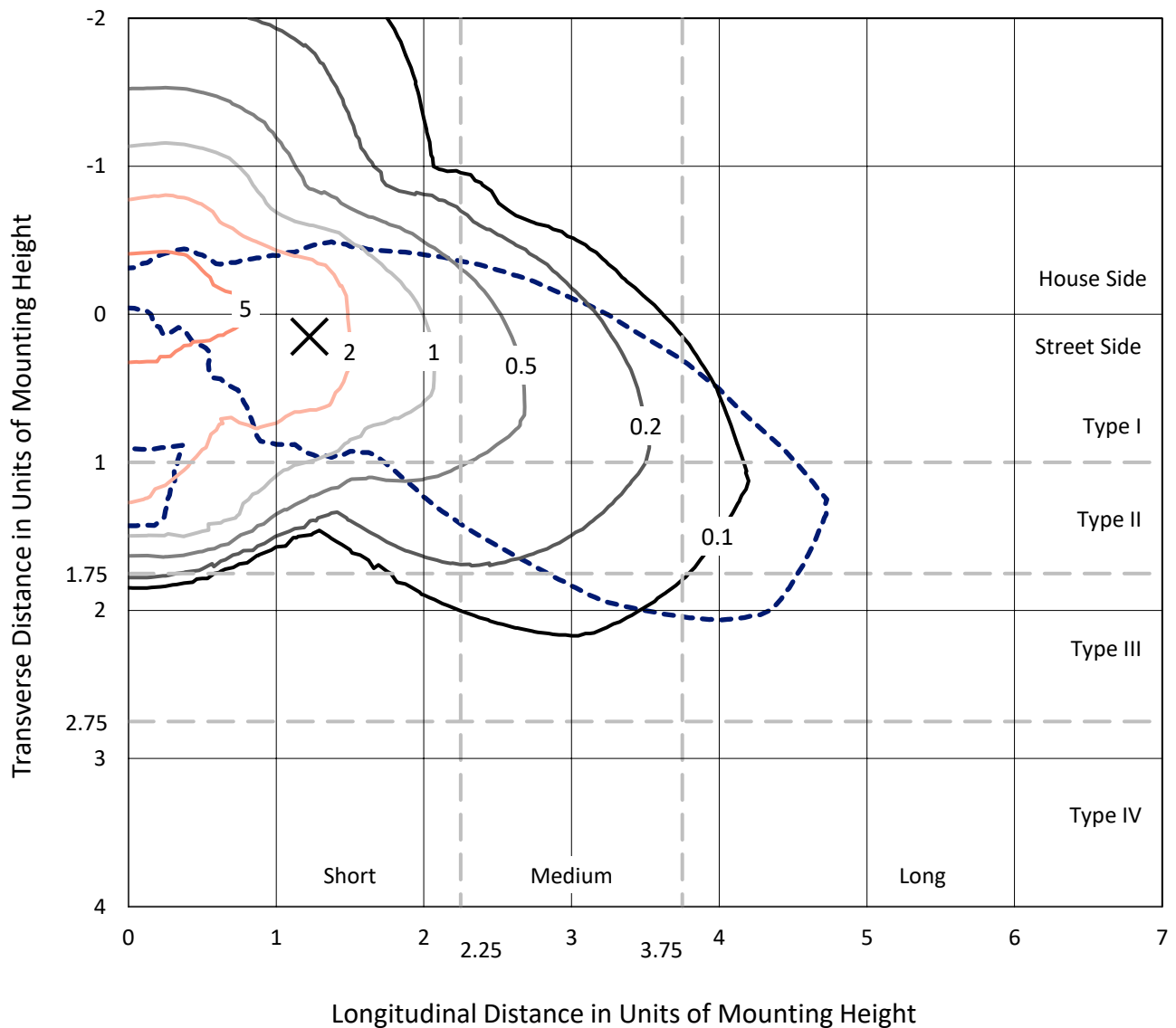




REPORT NUMBER: P591213
 CATALOG NUMBER: CTN-CA10-310-727-U-T4-SSS-HM-EX180

Iso-Footcandle Lines of Horizontal Illumination

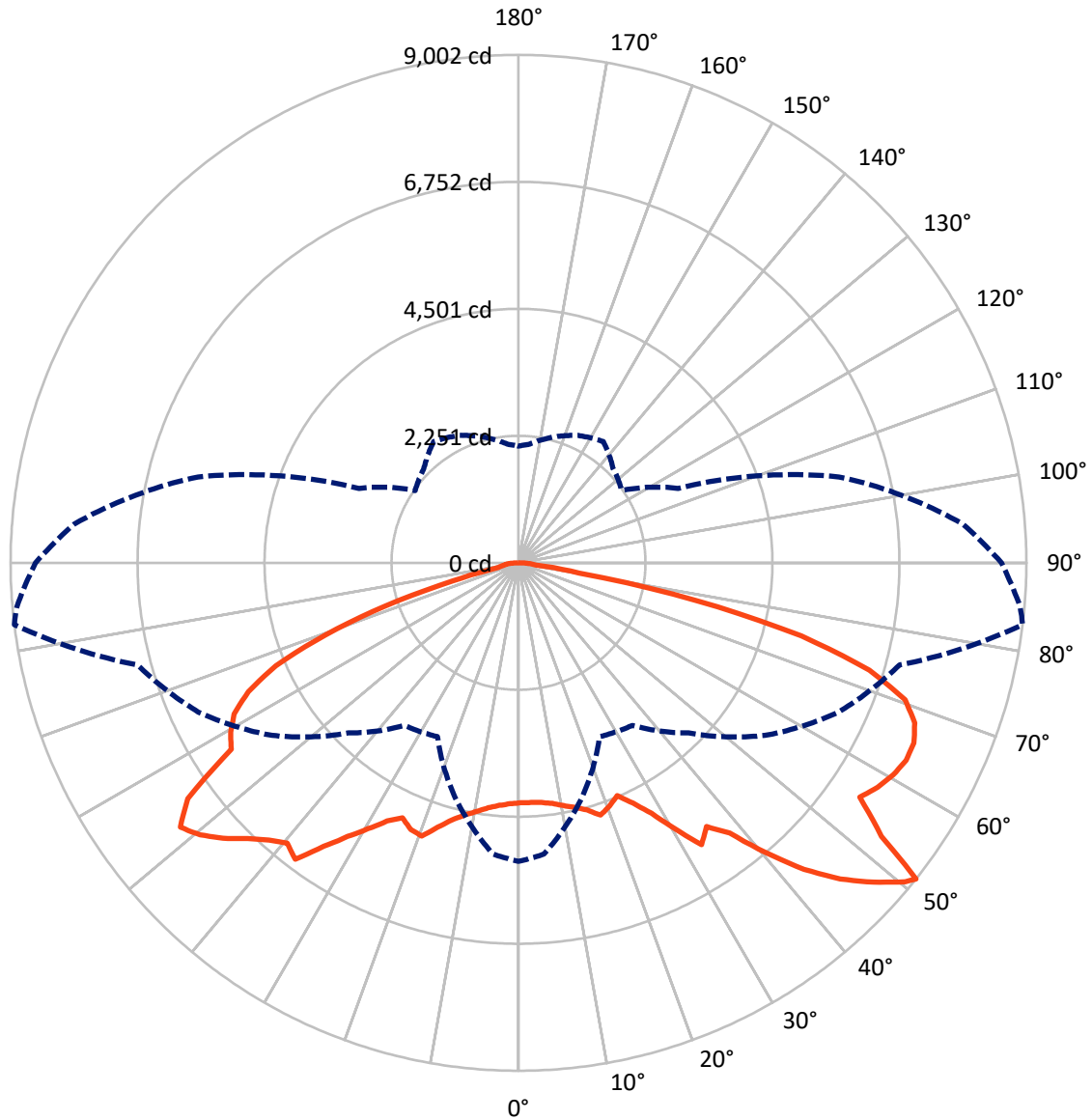
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.2 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 83-Deg Lateral - - - Horizontal Cone Through 51-Deg Vertical

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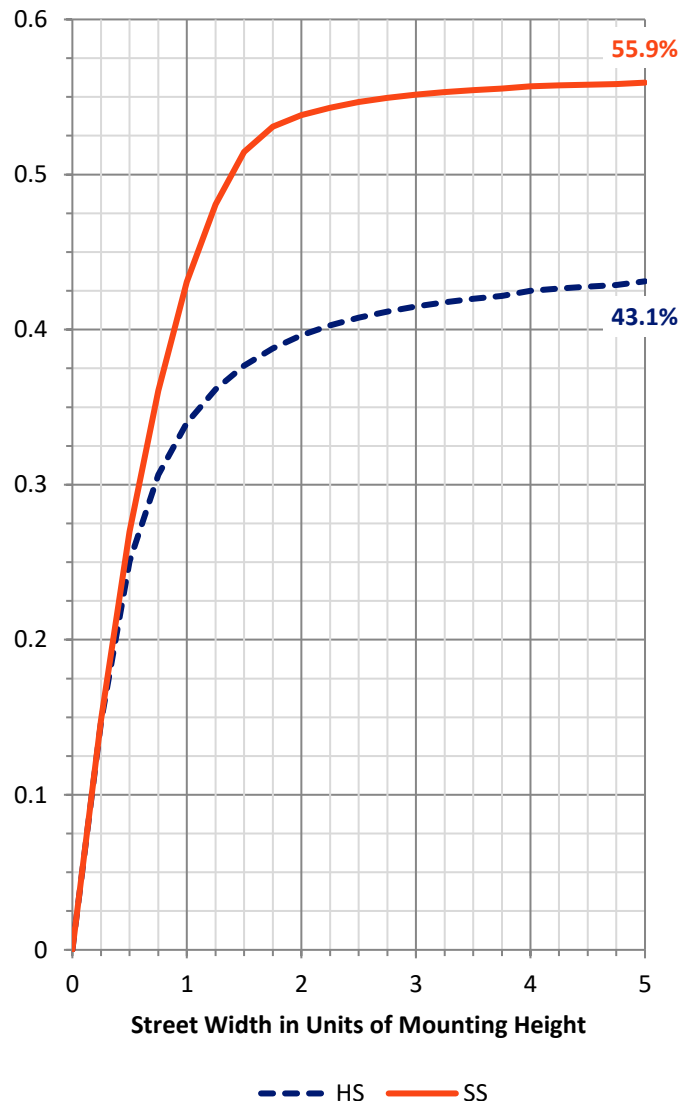
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7950.8	0.0	7950.8
	% Fixture	44.1	0.0	44.1
Street Side	Lumens	10088.2	0.0	10088.2
	% Fixture	55.9	0.0	55.9
Total	Lumens	18039.0	0.0	18039.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	415.3	2.3
10°-20°	1264.0	7.0
20°-30°	1963.6	10.9
30°-40°	2627.3	14.6
40°-50°	3408.7	18.9
50°-60°	3630.3	20.1
60°-70°	2528.9	14.0
70°-80°	1764.3	9.8
80°-90°	436.5	2.4
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°	18039.0	100.0
0°-180°	18039.0	100.0

Coefficient of Utilization



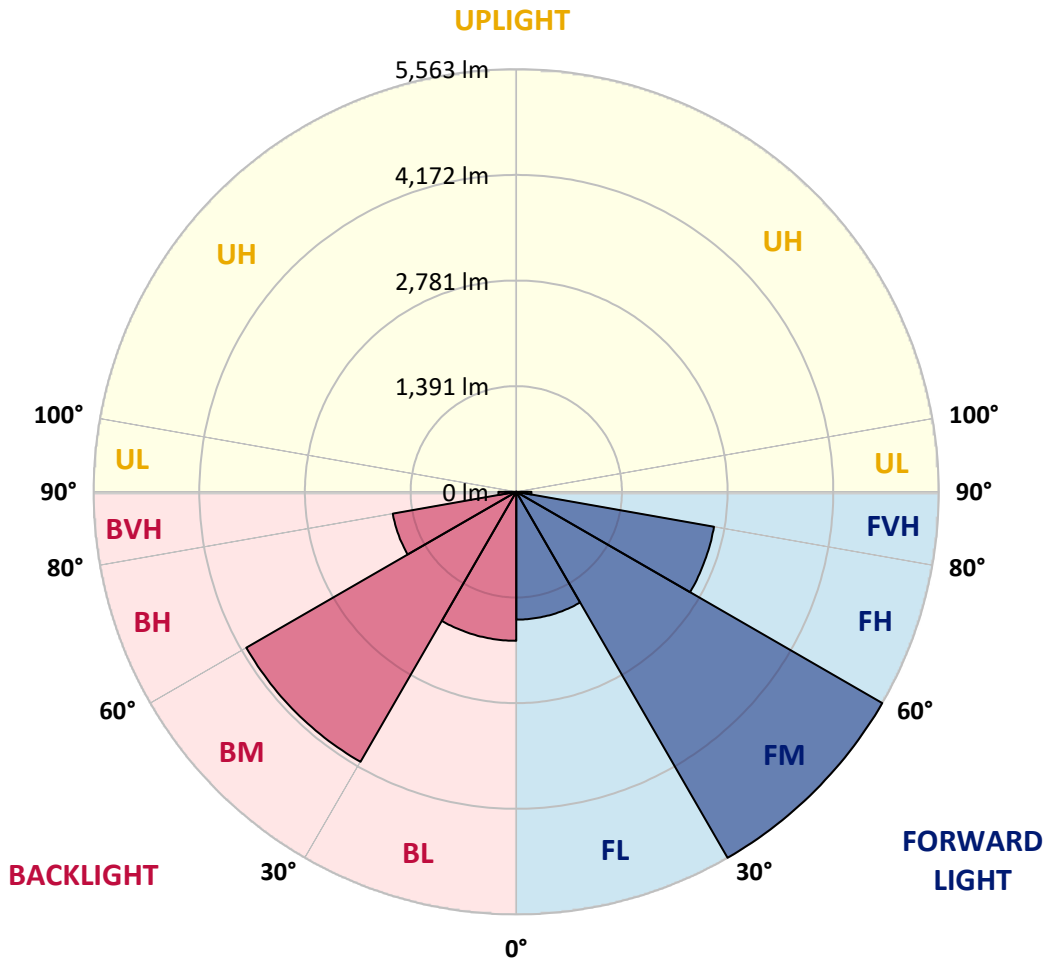
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 CATALOG NUMBER: CTN-CA10-310-727-U-T4-SSS-HM-EX180

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1682.0	9.3			
FM (30°-60°)	5562.7	30.8			
FH (60°-80°)	2643.1	14.7			G2/5000
FVH (80°-90°)	200.4	1.1			G2/225
BL (0°-30°)	1961.0	10.9	B3/2500		
BM (30°-60°)	4103.6	22.7	B3/5000		
BH (60°-80°)	1650.1	9.1	B3/2500		G3/2500
BVH (80°-90°)	236.1	1.3			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	83°	85°
0°	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8
2.5°	4201.1	4172.0	4174.5	4213.8	4161.8	4196.0	4191.0	4251.8	4240.4	4253.1	4262.0
5°	4164.3	4141.5	4141.5	4193.5	4156.7	4193.5	4168.2	4221.4	4239.2	4267.1	4277.2
7.5°	4172.0	4147.9	4158.0	4203.7	4163.1	4201.1	4199.9	4250.6	4256.9	4306.4	4322.9
10°	4193.5	4166.9	4172.0	4208.7	4185.9	4251.8	4240.4	4310.2	4310.2	4376.1	4401.5
12.5°	4149.1	4131.4	4141.5	4191.0	4211.3	4279.7	4295.0	4366.0	4376.1	4447.1	4478.8
15°	4100.9	4075.6	4108.6	4179.6	4213.8	4312.7	4345.7	4454.7	4470.0	4543.5	4579.0
17.5°	3867.6	3851.1	3912.0	3969.1	3988.1	4084.5	4149.1	4330.5	4548.6	4702.0	4743.9
20°	3403.5	3401.0	3288.1	3264.0	3559.5	3912.0	3956.4	4111.1	4363.4	4603.1	4688.1
22.5°	2841.7	2917.8	3284.3	3401.0	3393.4	3532.8	4100.9	4246.8	4358.4	4480.1	4530.8
25°	2841.7	2835.4	3052.2	3554.4	3555.7	3615.3	3742.1	4472.5	4579.0	4718.5	4759.1
27.5°	2931.8	2938.1	2924.2	3290.6	3730.7	3786.5	3841.0	4218.9	4871.9	5026.6	5093.8
30°	3083.9	3094.1	3038.3	3039.6	3789.0	3956.4	4060.4	4208.7	5076.1	5473.0	5503.4
32.5°	3384.5	3380.7	3310.9	3220.9	3324.9	4122.5	4274.7	4467.4	4754.0	5954.9	6025.9
35°	3624.1	3607.7	3559.5	3497.3	3360.4	4075.6	4478.8	4745.1	5110.3	5740.6	6115.9
37.5°	3890.4	3866.3	3811.8	3735.7	3611.5	2844.3	4680.5	5062.1	5629.0	6076.6	6100.7
40°	4191.0	4164.3	4089.5	3977.9	3819.4	2914.0	4770.5	5454.0	6304.9	6755.0	6751.2
42.5°	4421.8	4395.1	4355.8	4237.9	3357.9	3214.6	4160.5	6004.3	7036.5	7427.1	7394.1
45°	4617.0	4594.2	4598.0	4473.8	3149.9	3583.6	4634.8	6292.2	7726.4	7992.7	7949.5
47.5°	4769.2	4733.7	4637.3	3763.6	3231.0	3838.5	5020.3	5488.2	8308.4	8459.3	8411.1
50°	5139.5	5079.9	4506.7	3341.4	3436.5	4150.4	5386.8	6053.8	7567.9	8884.1	8799.1
51°	5290.4	5182.6	4319.1	3399.7	3517.6	4263.3	5332.2	6259.2	6990.9	9002.0	8926.0
52.5°	5448.9	5235.9	3804.2	3488.5	3616.5	4419.2	4529.6	6575.0	7151.9	8056.1	8505.0
55°	4596.8	4680.5	3928.5	3813.1	3804.2	3819.4	4625.9	7045.4	7488.0	7335.8	7247.0
57.5°	2703.5	2753.0	3990.6	4269.6	3291.9	3033.2	4880.8	7400.5	7778.4	7504.4	7405.5
60°	1359.4	1422.8	1453.2	1325.1	1775.3	2766.9	4111.1	5363.9	7955.9	7631.3	7512.1
62.5°	59.6	98.9	39.3	43.1	72.3	965.0	3020.5	5509.8	8105.5	7708.6	7551.4
65°	5.1	5.1	6.3	12.7	31.7	1013.2	3361.7	5711.4	8166.4	7701.0	7490.5
67.5°	1.3	1.3	2.5	8.9	22.8	1096.9	3762.4	5793.8	8168.9	7571.7	7314.2
70°	0.0	1.3	2.5	7.6	20.3	1147.6	3849.9	5777.3	8064.9	7267.3	6913.5
72.5°	0.0	0.0	1.3	6.3	17.8	1082.9	3748.4	5744.4	7709.9	6501.4	5999.2
75°	0.0	0.0	1.3	5.1	15.2	1102.0	3758.6	5374.1	6732.2	5176.3	4566.3
77.5°	0.0	0.0	1.3	5.1	13.9	1017.0	3441.5	4653.8	5320.8	3222.2	2555.2
80°	0.0	0.0	1.3	5.1	12.7	872.4	2830.3	3633.0	2977.4	1093.1	705.0
82.5°	0.0	0.0	1.3	5.1	10.1	590.9	1880.5	1815.9	599.8	313.2	281.5
85°	0.0	0.0	1.3	3.8	7.6	352.5	942.2	247.3	232.1	199.1	180.1
87.5°	0.0	0.0	1.3	2.5	5.1	149.6	290.4	76.1	96.4	81.2	72.3
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°	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8	4251.8
2.5°	4269.6	4269.6	4283.5	4330.5	4325.4	4363.4	4341.9	4388.8	4392.6	4383.7	4405.3
5°	4286.1	4301.3	4348.2	4397.7	4377.4	4433.2	4459.8	4521.9	4519.4	4511.8	4537.2
7.5°	4333.0	4364.7	4411.6	4471.2	4492.8	4538.4	4541.0	4625.9	4620.9	4617.0	4642.4
10°	4411.6	4453.5	4505.5	4595.5	4582.8	4648.7	4620.9	4683.0	4681.7	4679.2	4704.5
12.5°	4492.8	4553.6	4617.0	4704.5	4703.3	4705.8	4681.7	4713.4	4707.1	4689.3	4708.3
15°	4606.9	4688.1	4775.6	4839.0	4783.2	4771.8	4718.5	4699.5	4662.7	4612.0	4627.2
17.5°	4795.8	4875.7	4987.3	5021.6	4930.3	4878.3	4733.7	4628.5	4514.3	4437.0	4453.5
20°	4965.8	5114.1	5220.7	5218.1	5101.5	4964.5	4740.1	4562.5	4341.9	4192.2	4179.6
22.5°	4754.0	5003.8	5467.9	5413.4	5209.2	5015.2	4732.4	4457.3	4090.8	3858.7	3849.9
25°	4875.7	4880.8	5296.7	5522.5	5257.4	4993.7	4641.1	4273.4	3804.2	3563.3	3549.3
27.5°	5186.4	5158.5	5043.1	5405.8	5213.0	4883.3	4457.3	3960.2	3543.0	3333.8	3323.6
30°	5555.4	5469.2	5197.8	4840.2	5030.4	4669.0	4174.5	3639.4	3307.1	3116.9	3101.7
32.5°	5996.7	5815.4	5338.6	4778.1	4431.9	4345.7	3809.3	3385.8	3111.8	2914.0	2874.7
35°	6520.4	6249.1	5474.3	4672.8	3965.3	3866.3	3465.6	3157.5	2928.0	2727.6	2688.3
37.5°	6519.2	6801.9	5674.6	4528.3	3676.1	3328.7	3215.8	3005.3	2799.9	2557.7	2513.3
40°	6567.3	6576.2	5895.3	4387.5	3406.0	3052.2	3067.5	2930.5	2718.7	2452.5	2406.8
42.5°	7153.2	6722.0	6165.4	4198.6	3151.2	2848.1	3004.1	2903.9	2675.6	2403.0	2352.3
45°	7663.0	7165.9	5573.2	3991.9	2883.6	2689.6	2953.3	2841.7	2614.8	2343.4	2286.3
47.5°	8106.8	7518.4	5724.1	3630.5	2622.4	2560.2	2855.7	2722.5	2505.7	2253.4	2202.6
50°	8444.1	7810.1	5856.0	3144.8	2368.8	2430.9	2697.2	2561.5	2352.3	2148.1	2105.0
51°	8559.5	7903.9	5882.6	3123.3	2234.3	2370.0	2622.4	2490.5	2302.8	2107.5	2068.2
52.5°	8683.8	8025.6	5921.9	3171.4	2044.1	2269.8	2500.6	2385.2	2229.3	2061.9	2017.5
55°	7220.4	7541.2	5821.7	3070.0	1823.5	2070.8	2277.5	2225.5	2139.2	1990.9	1959.2
57.5°	6956.6	6380.9	4828.8	2599.5	1629.5	1833.6	2060.6	2094.9	2028.9	1878.0	1855.2
60°	7013.7	6322.6	4300.0	1938.9	1436.7	1621.9	1898.3	1928.7	1871.7	1757.5	1725.8
62.5°	7003.6	6173.0	3834.6	1365.7	1269.3	1511.5	1781.6	1794.3	1715.7	1620.6	1591.4
65°	6836.2	5829.3	3199.3	1033.5	1176.8	1450.7	1713.2	1719.5	1621.9	1500.1	1484.9
67.5°	6463.4	5285.3	2225.5	907.9	1124.8	1403.8	1667.5	1639.6	1545.8	1417.7	1394.9
70°	5749.4	4306.4	1039.8	835.7	1046.2	1317.5	1555.9	1523.0	1420.2	1301.0	1280.8
72.5°	4609.4	2992.6	493.3	764.6	963.7	1209.7	1419.0	1367.0	1282.0	1237.6	1226.2
75°	3016.7	1405.0	412.1	688.6	854.7	1079.1	1301.0	1282.0	1203.4	1114.6	1071.5
77.5°	1223.7	370.3	372.8	611.2	767.2	994.2	1175.5	1160.3	1056.3	976.4	958.7
80°	308.1	277.7	341.1	504.7	668.3	866.1	1030.9	987.8	949.8	863.6	835.7
82.5°	234.6	223.2	267.6	390.6	549.1	713.9	880.0	897.8	834.4	768.5	754.5
85°	163.6	202.9	162.3	277.7	407.1	563.0	738.0	769.7	726.6	651.8	601.1
87.5°	90.0	106.5	67.2	145.8	215.6	308.1	423.5	427.3	353.8	324.6	305.6
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)