

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: P591214

Luminaire Tested: **CTN-CA10-310-727-U-T4-SSS-HM-EX90**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591214
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-10)
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-EX90
Description: CELESTEON HIGH MAST LUMINAIRE, 90D 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: 26026 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

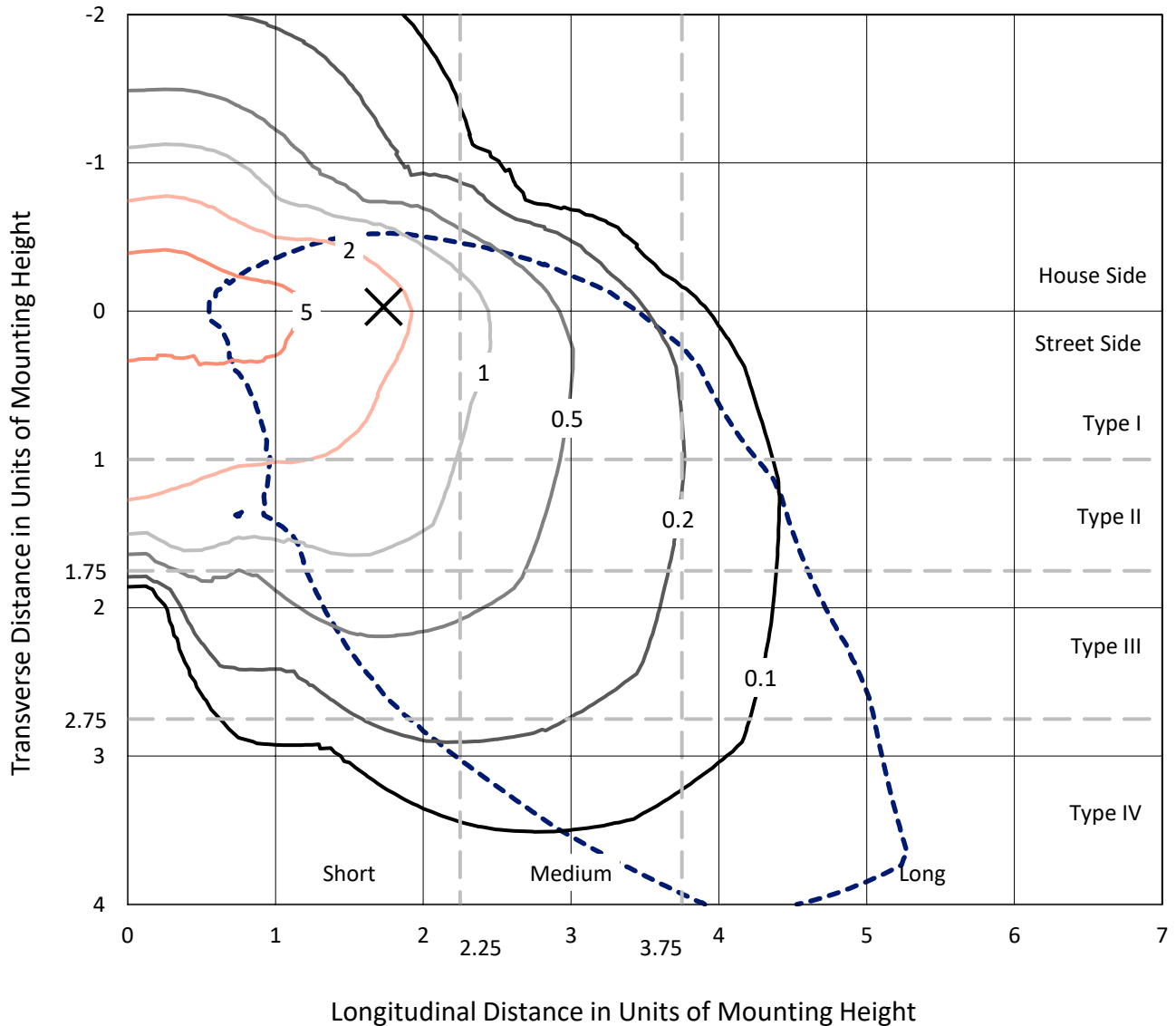
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P591214
 CATALOG NUMBER: CTN-CA10-310-727-U-T4-SSS-HM-EX90

Iso-Footcandle Lines of Horizontal Illumination

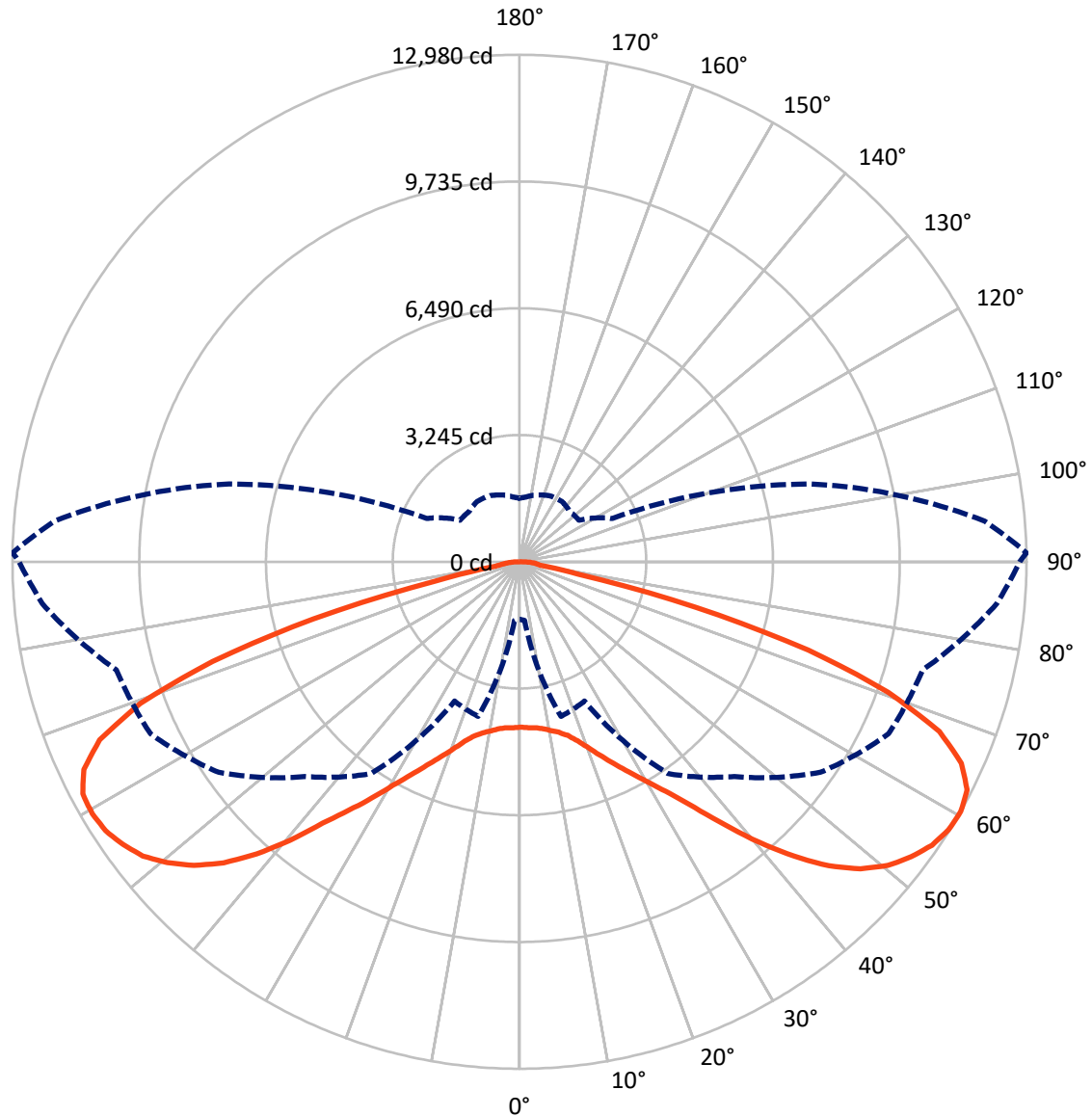
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 fc
 Type IV - Short - N/A

REPORT NUMBER: P591214
CATALOG NUMBER: CTN-CA10-310-727-U-T4-SSS-HM-EX90

Luminous Intensity Polar Plot



— Vertical Plane Through 91-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

REPORT NUMBER: P591214
 CATALOG NUMBER: CTN-CA10-310-727-U-T4-SSS-HM-EX90

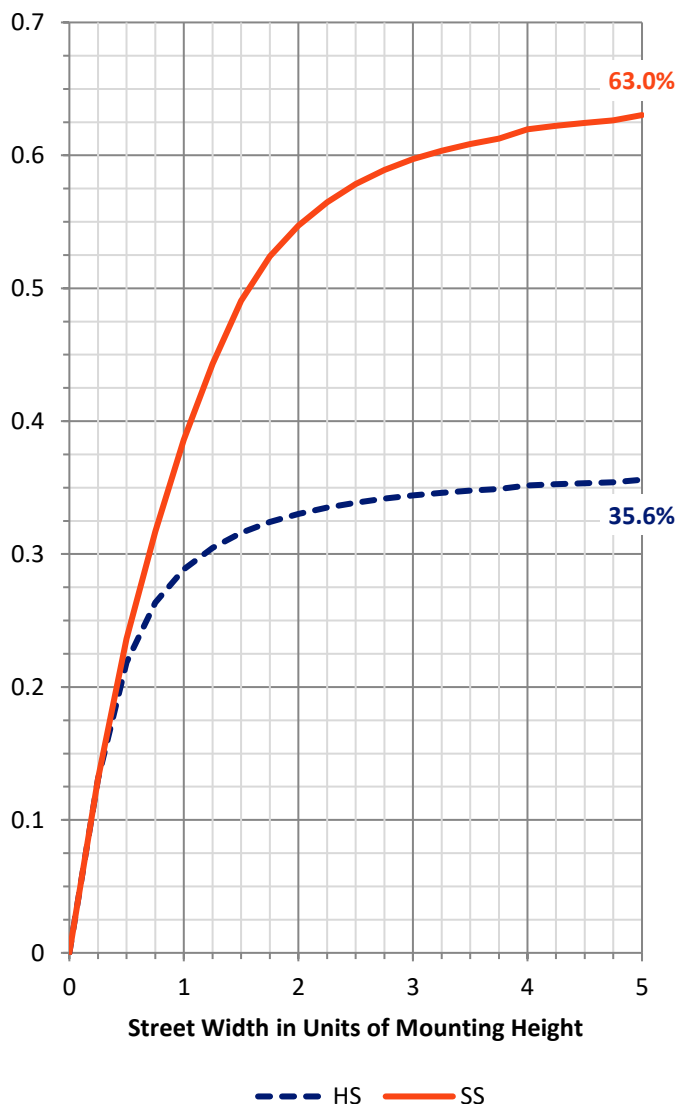
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9451.7	0.0	9451.7
	% Fixture	36.3	0.0	36.3
Street Side	Lumens	16574.3	0.0	16574.3
	% Fixture	63.7	0.0	63.7
Total	Lumens	26026.0	0.0	26026.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	412.7	1.6
10°-20°	1265.7	4.9
20°-30°	2074.8	8.0
30°-40°	2930.2	11.3
40°-50°	4124.9	15.8
50°-60°	5190.3	19.9
60°-70°	5224.4	20.1
70°-80°	3843.5	14.8
80°-90°	959.5	3.7
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°	26026.0	100.0
0°-180°	26026.0	100.0

Coefficient of Utilization

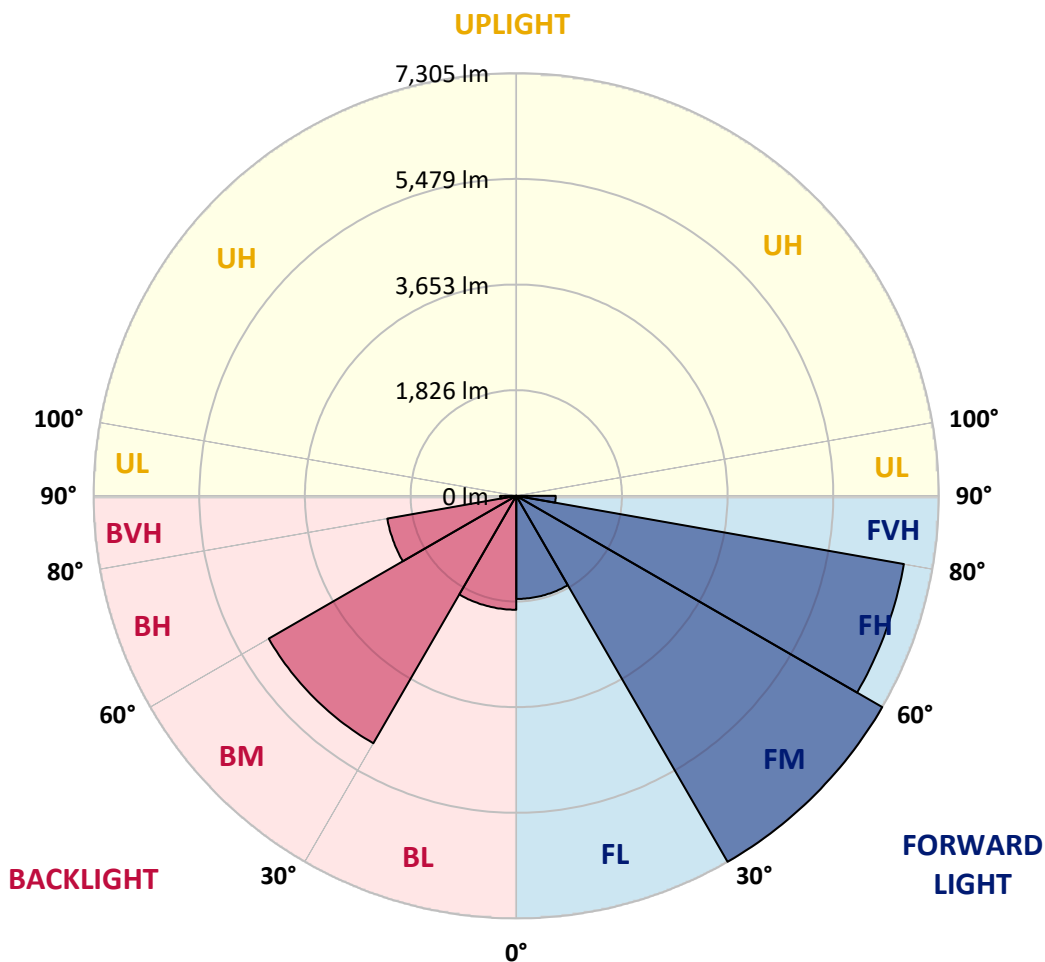


REPORT NUMBER: P591214
 CATALOG NUMBER: CTN-CA10-310-727-U-T4-SSS-HM-EX90

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1783.1	6.9			
FM (30°-60°)	7305.5	28.1			
FH (60°-80°)	6804.3	26.1			G3/7500
FVH (80°-90°)	681.5	2.6			G4/750
BL (0°-30°)	1970.1	7.6	B3/2500		
BM (30°-60°)	4940.0	19.0	B3/5000		
BH (60°-80°)	2263.7	8.7	B3/2500		G3/2500
BVH (80°-90°)	278.0	1.1			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4
 Type IV Short





REPORT NUMBER: P591214

CATALOG NUMBER: CTN-CA10-310-727-U-T4-SSS-HM-EX90

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8
2.5°	4191.0	4164.3	4165.6	4204.9	4145.3	4183.3	4174.5	4235.3	4223.9	4245.5	4250.6
5°	4161.8	4140.2	4140.2	4187.2	4146.6	4179.5	4151.6	4204.9	4223.9	4255.6	4262.0
7.5°	4173.2	4150.4	4159.3	4199.8	4154.2	4188.4	4185.9	4232.8	4244.2	4297.5	4305.1
10°	4193.5	4173.2	4175.7	4210.0	4179.5	4242.9	4231.5	4298.7	4297.5	4381.2	4387.5
12.5°	4158.0	4142.8	4142.8	4188.4	4206.2	4273.4	4296.2	4365.9	4373.6	4467.4	4475.0
15°	4102.2	4076.8	4114.9	4183.3	4220.1	4325.4	4364.7	4475.0	4495.3	4584.1	4603.1
17.5°	3985.5	3996.9	4103.5	4055.3	3887.9	4043.9	4476.3	4617.0	4661.4	4766.7	4812.3
20°	3624.1	3483.4	3204.4	3280.5	3625.4	4070.5	4632.2	4797.1	4894.7	5019.0	5096.4
22.5°	2737.8	2826.5	3347.7	3402.2	3417.4	3714.2	4850.3	5017.7	5147.1	5304.3	5407.0
25°	2839.2	2830.3	3009.1	3568.3	3583.6	3753.5	4566.3	5305.6	5422.2	5640.4	5743.1
27.5°	2933.0	2933.0	2922.9	3369.2	3756.0	3923.4	4714.7	5093.8	5783.6	6020.8	6141.2
30°	3089.0	3094.1	3037.0	3035.7	3898.0	4079.4	5001.2	5188.9	6103.2	6552.1	6580.0
32.5°	3398.4	3380.7	3309.6	3200.6	3371.8	4260.7	5281.5	5532.6	5795.1	7149.4	7124.0
35°	3621.6	3607.6	3556.9	3480.8	3402.2	4343.1	5544.0	5892.7	6322.6	7325.6	7812.5
37.5°	3891.7	3868.9	3811.8	3721.8	3671.0	3749.7	5814.1	6299.7	6982.0	7534.8	8589.9
40°	4187.2	4180.8	4093.3	3976.7	3906.9	3965.2	6020.8	6807.0	7799.9	8423.8	9447.1
42.5°	4414.1	4409.1	4336.8	4269.6	4236.6	4354.5	5507.2	7479.0	8735.7	9231.5	10272.6
45°	4618.3	4610.7	4608.1	4585.3	4612.0	4898.5	6070.2	7893.7	9655.0	9926.4	11023.3
47.5°	4773.0	4750.2	4685.5	4691.8	4766.7	5249.8	6656.1	7268.5	10400.7	10538.9	11609.1
50°	5140.7	5117.9	4894.7	4902.3	5046.9	5686.0	7160.8	7992.6	9707.0	11068.9	12058.0
52.5°	5469.2	5280.2	5158.5	5163.6	5361.4	6150.1	7733.9	8742.0	9542.2	11488.7	12420.7
55°	4723.5	4601.8	5786.2	5621.3	5730.4	6656.1	8290.6	9391.3	9994.9	11809.5	12628.7
57.5°	2772.0	2756.8	6368.2	6511.5	6384.7	7202.6	8853.6	9931.5	10391.8	12108.8	12768.1
60°	1471.0	1506.5	4095.8	3936.1	6618.0	7773.2	9398.9	10422.2	10686.0	12263.5	12806.2
62.5°	135.7	120.5	2692.1	3058.6	5932.0	8518.9	10045.6	10921.8	10885.1	12345.9	12739.0
65°	26.6	35.5	2641.4	3021.8	6591.4	9755.2	11101.9	11306.1	10992.9	12247.0	12386.5
67.5°	20.3	30.4	2495.6	2988.8	6995.9	10230.7	12318.0	11441.8	10999.2	11931.2	11610.4
70°	20.3	31.7	2202.6	2793.5	7187.4	10251.0	12605.8	11388.5	10857.2	11216.0	10148.3
72.5°	20.3	31.7	1850.1	2420.7	6861.5	9811.0	12101.1	11093.0	10328.4	9657.6	7915.3
75°	20.3	29.2	1451.9	1966.8	5930.7	9132.6	11235.1	9807.2	8693.9	7066.9	5078.6
77.5°	20.3	27.9	1070.2	1539.4	4949.3	8054.7	9770.4	8061.1	6553.4	3700.2	1869.1
80°	19.0	27.9	651.8	1085.5	3813.1	6497.6	7678.1	5956.1	3444.1	930.8	540.2
82.5°	19.0	26.6	310.7	694.9	2679.4	4642.4	5010.1	2551.3	732.9	429.9	429.9
85°	16.5	24.1	166.1	377.9	1751.2	3043.4	2416.9	432.4	286.6	290.4	331.0
87.5°	10.1	12.7	78.6	169.9	1009.4	1626.9	930.8	158.5	119.2	125.5	187.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P591214

CATALOG NUMBER: CTN-CA10-310-727-U-T4-SSS-HM-EX90

CANDELA DISTRIBUTION (continued):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8	4232.8
2.5°	4254.4	4248.0	4262.0	4306.3	4298.7	4330.4	4305.1	4349.5	4358.3	4345.7	4365.9
5°	4268.3	4277.2	4324.1	4365.9	4343.1	4393.8	4407.8	4469.9	4468.7	4457.2	4482.6
7.5°	4314.0	4338.1	4385.0	4437.0	4448.4	4489.0	4483.9	4562.5	4553.6	4548.5	4573.9
10°	4392.6	4429.4	4473.7	4560.0	4532.1	4600.5	4553.6	4606.9	4601.8	4589.1	4612.0
12.5°	4480.1	4530.8	4584.1	4662.7	4651.3	4650.0	4608.1	4624.6	4610.7	4580.3	4599.3
15°	4612.0	4674.1	4747.6	4798.4	4731.2	4705.8	4639.8	4604.3	4556.2	4485.1	4496.6
17.5°	4817.4	4890.9	4969.5	4978.4	4874.4	4808.5	4648.7	4521.9	4396.4	4301.3	4310.2
20°	5093.8	5161.0	5219.4	5177.5	5036.8	4889.7	4648.7	4448.4	4213.8	4038.8	4026.1
22.5°	5417.2	5437.5	5493.3	5390.5	5148.3	4942.9	4636.0	4338.1	3956.4	3723.0	3695.1
25°	5765.9	5763.4	5739.3	5526.2	5218.1	4913.8	4539.7	4149.1	3662.2	3418.7	3398.4
27.5°	6145.0	6113.3	5948.5	5640.4	5188.9	4808.5	4357.1	3830.8	3394.6	3185.4	3179.0
30°	6572.4	6488.7	6155.2	5651.8	5079.9	4600.5	4060.3	3510.0	3156.2	2969.8	2952.1
32.5°	7070.7	6907.1	6320.0	5615.0	4883.3	4283.5	3698.9	3257.7	2960.9	2756.8	2717.5
35°	7721.2	7434.7	6472.2	5494.5	4591.7	3906.9	3365.4	3033.2	2779.6	2570.4	2528.5
37.5°	8539.1	8118.2	6701.7	5318.3	4258.2	3570.9	3134.7	2884.8	2654.1	2406.8	2356.1
40°	9447.1	8922.1	6970.6	5147.1	3941.1	3321.1	2983.8	2815.1	2572.9	2301.5	2253.4
42.5°	10306.8	9731.1	7373.8	4925.2	3639.3	3120.7	2929.2	2794.8	2534.9	2255.9	2203.9
45°	11100.6	10442.5	7789.7	4702.0	3332.5	2957.1	2883.6	2735.2	2476.5	2202.6	2143.0
47.5°	11748.6	11003.0	8157.5	4471.2	3062.4	2829.1	2796.1	2621.1	2373.8	2116.4	2060.6
50°	12219.1	11432.9	8373.0	4256.9	2802.4	2701.0	2642.6	2458.8	2229.3	2015.0	1974.4
52.5°	12552.6	11804.4	8480.8	4232.8	2566.6	2528.5	2463.9	2291.4	2107.5	1941.4	1893.2
55°	12810.0	12007.3	8388.2	4092.0	2343.4	2311.7	2244.5	2138.0	2027.6	1872.9	1841.2
57.5°	12949.5	12099.9	8176.5	3451.7	2106.3	2051.7	2042.9	2020.0	1923.7	1770.2	1746.1
60°	12979.9	11952.8	7697.2	2624.9	1857.7	1822.2	1889.4	1860.3	1774.0	1659.9	1625.7
62.5°	12860.7	11638.3	6788.0	1963.0	1651.0	1709.4	1777.8	1733.4	1633.3	1521.7	1500.1
65°	12430.8	10916.8	5470.4	1528.0	1555.9	1656.1	1717.0	1663.7	1542.0	1415.2	1401.2
67.5°	11590.1	9793.3	3601.3	1374.6	1511.5	1611.7	1680.2	1595.2	1472.2	1335.3	1318.8
70°	10013.9	7741.5	1715.7	1282.0	1426.6	1525.5	1580.0	1483.6	1364.4	1230.0	1212.3
72.5°	7733.9	5261.2	947.2	1180.6	1321.3	1412.6	1451.9	1337.8	1227.5	1171.7	1166.6
75°	4655.1	2261.0	855.9	1080.4	1185.6	1270.6	1340.3	1254.1	1157.7	1048.7	1020.8
77.5°	1536.9	656.9	805.2	961.2	1080.4	1183.1	1216.1	1132.4	1011.9	919.3	911.7
80°	538.9	550.3	750.7	800.1	940.9	1027.1	1063.9	967.5	910.5	814.1	795.1
82.5°	438.8	493.3	606.1	603.6	743.1	844.5	900.3	876.2	801.4	724.1	716.5
85°	358.9	451.4	384.2	422.3	532.6	642.9	749.4	752.0	694.9	616.3	564.3
87.5°	213.0	230.8	191.5	215.6	281.5	361.4	418.5	399.4	327.2	276.4	270.1
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)