

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: P591163

Luminaire Tested: **CTN-CA8-230-722-U-T3-SSS-HM-EX90**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591163
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-7)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA8-230-722-U-T3-SSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (8) 2200K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20235 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

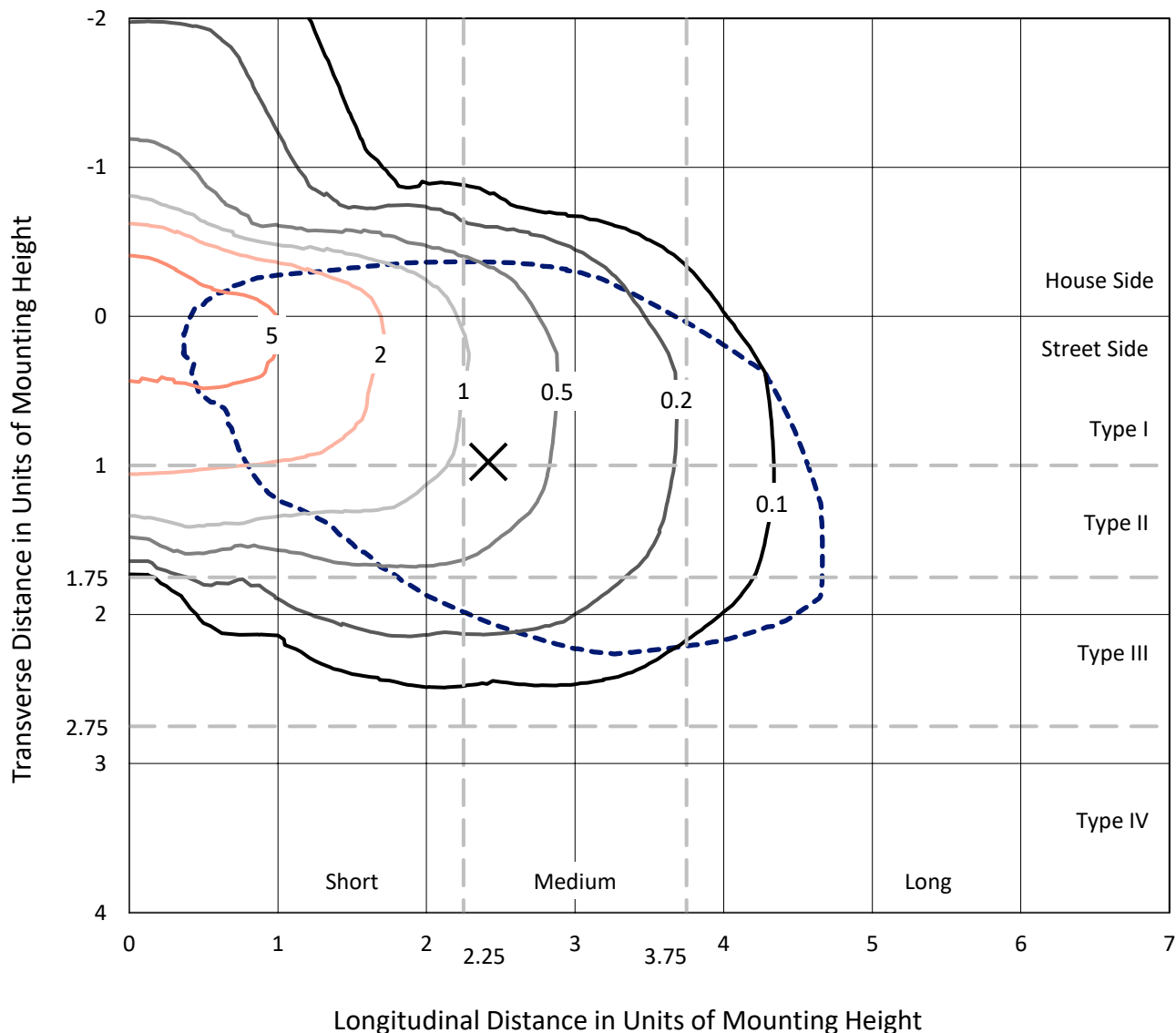
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

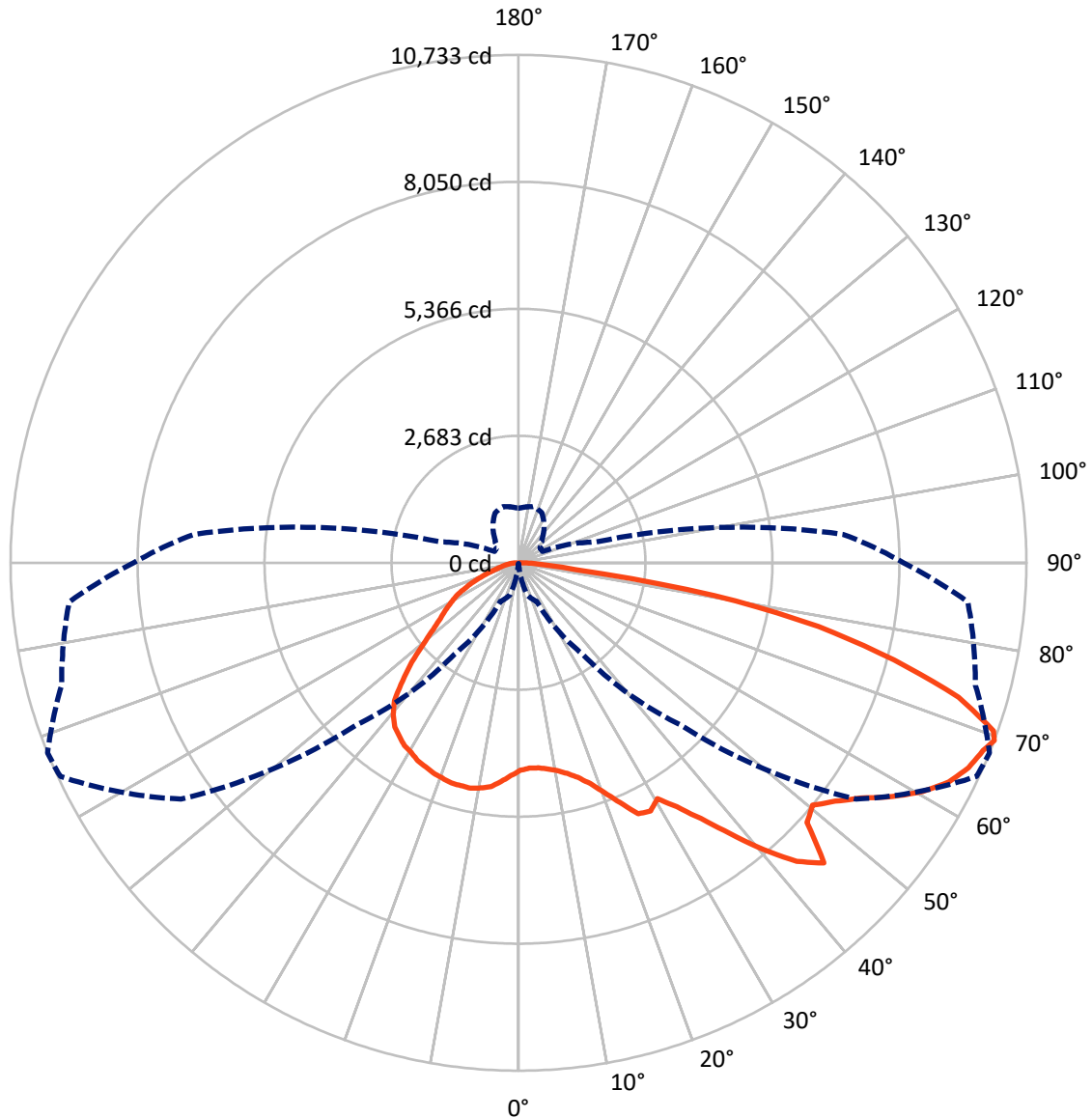
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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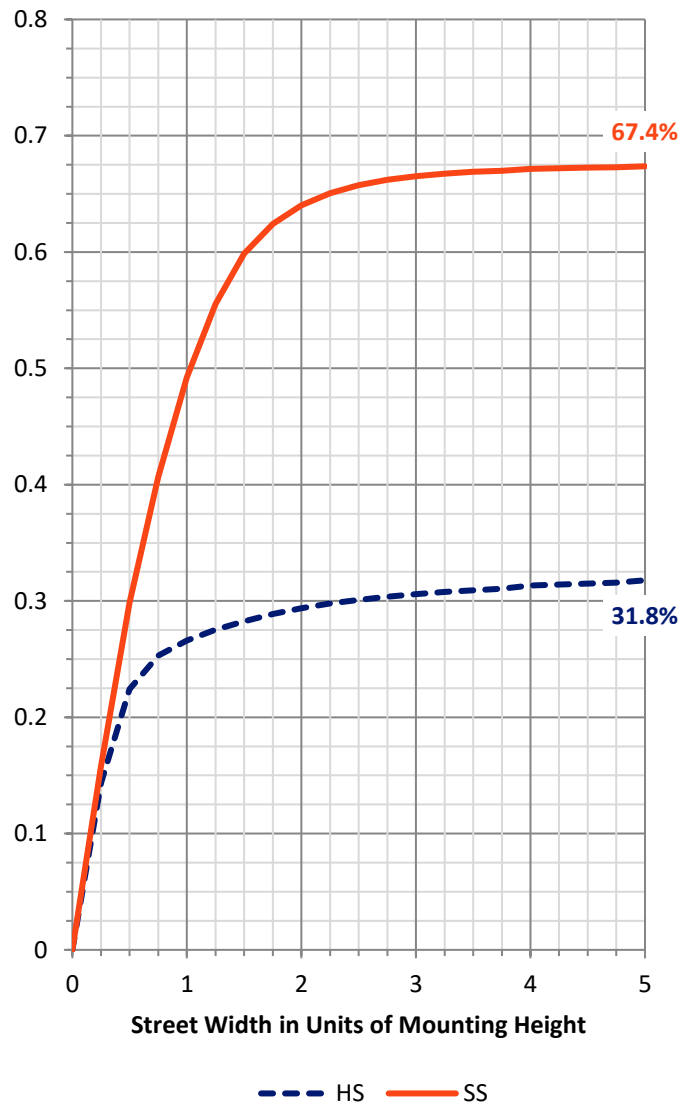
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6600.4	0.0	6600.4
	% Fixture	32.6	0.0	32.6
Street Side	Lumens	13634.6	0.0	13634.6
	% Fixture	67.4	0.0	67.4
Total	Lumens	20235.0	0.0	20235.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	438.1	2.2
10°-20°	1355.5	6.7
20°-30°	2084.1	10.3
30°-40°	2706.8	13.4
40°-50°	3341.1	16.5
50°-60°	3752.4	18.5
60°-70°	3667.2	18.1
70°-80°	2462.6	12.2
80°-90°	427.1	2.1
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°	20235.0	100.0
0°-180°	20235.0	100.0

Coefficient of Utilization



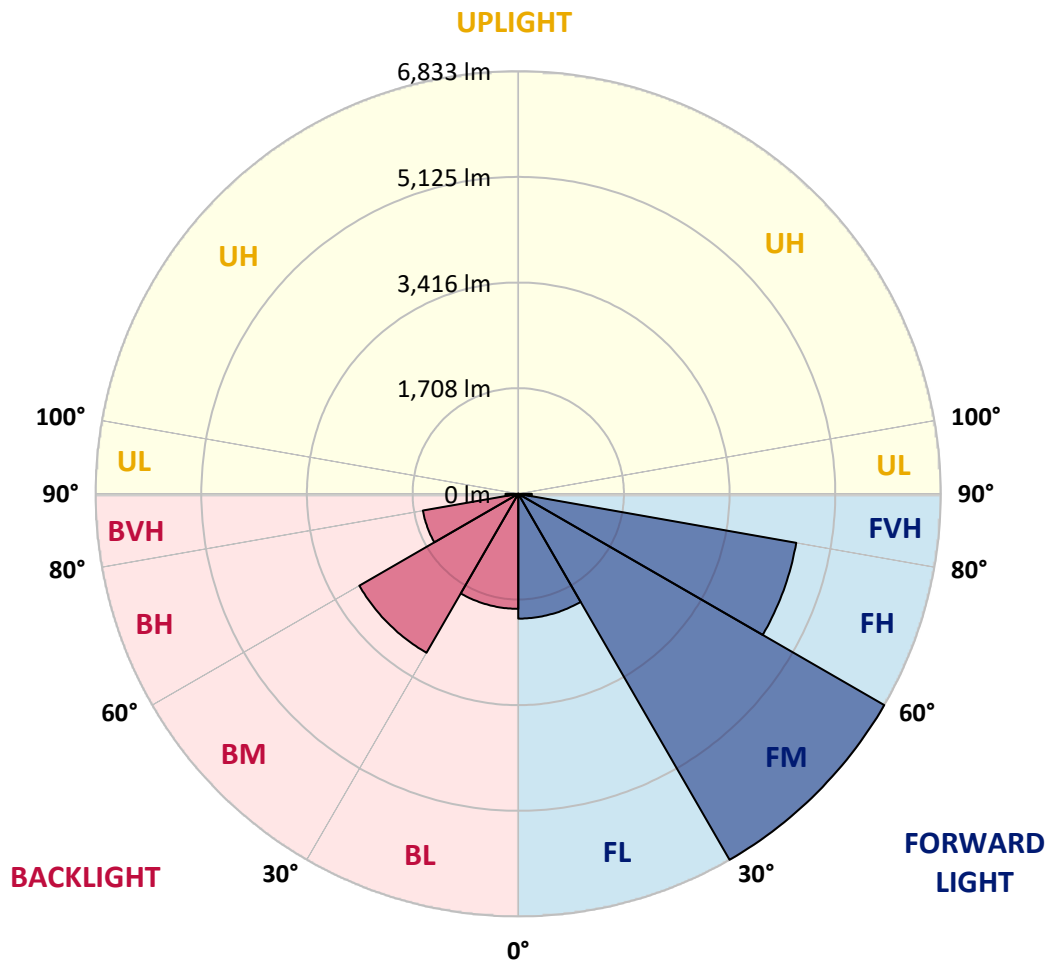
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2017.6	10.0			
FM (30°-60°)	6832.8	33.8			
FH (60°-80°)	4564.0	22.6			G2/5000
FVH (80°-90°)	220.2	1.1			G2/225
BL (0°-30°)	1860.0	9.2	B3/2500		
BM (30°-60°)	2967.5	14.7	B3/5000		
BH (60°-80°)	1565.9	7.7	B3/2500		G3/2500
BVH (80°-90°)	207.0	1.0			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3
2.5°	4297.9	4271.7	4281.6	4317.7	4244.6	4292.4	4269.9	4318.6	4343.9	4333.1	4401.7
5°	4338.5	4309.6	4311.4	4336.7	4258.1	4298.8	4273.5	4325.8	4353.8	4338.5	4430.6
7.5°	4462.2	4430.6	4421.6	4419.8	4345.7	4376.4	4325.8	4368.3	4397.2	4389.1	4492.9
10°	4651.8	4613.9	4596.7	4586.8	4498.3	4489.3	4426.1	4445.0	4466.7	4475.7	4587.7
12.5°	4860.4	4808.9	4798.1	4768.3	4654.5	4634.6	4557.9	4566.9	4566.9	4587.7	4698.8
15°	5037.3	4994.9	4994.9	4964.2	4853.1	4825.2	4719.5	4708.7	4706.9	4723.1	4822.4
17.5°	4923.6	4900.1	4879.3	4864.0	4692.4	4647.3	4933.5	4914.5	4905.5	4921.8	4979.6
20°	4541.6	4604.8	4471.2	4282.5	4309.6	4853.1	5208.9	5174.6	5180.0	5196.3	5180.0
22.5°	3997.2	3841.0	4086.6	4154.3	4267.2	4669.0	5459.9	5496.0	5506.9	5507.8	5422.9
25°	3425.6	3512.3	3845.5	4362.0	4347.5	4682.5	5307.3	5821.1	5875.2	5869.8	5722.7
27.5°	3590.0	3573.7	3831.1	4170.5	4599.4	4969.6	5401.2	5629.7	5940.3	6284.3	6084.7
30°	3733.5	3720.0	3747.1	4222.0	4765.6	5256.8	5752.4	5715.4	5781.3	6404.4	6511.8
32.5°	3861.8	3851.8	3883.4	3935.8	4489.3	5566.4	6129.0	6121.7	6144.3	6193.1	7015.6
35°	3982.7	3983.6	4022.5	4108.2	4524.5	5630.6	6501.0	6577.7	6637.3	6744.7	6928.9
37.5°	4065.8	4067.6	4098.3	4202.1	4376.4	5313.6	6877.5	7151.1	7257.6	7450.8	7189.9
40°	4064.9	4078.5	4152.5	4287.9	4520.9	5104.2	6994.0	7801.2	7972.7	8113.6	7674.7
42.5°	3980.0	3987.3	4125.4	4370.1	4649.1	5263.1	6631.9	8435.0	8625.5	8586.7	8075.6
45°	3902.4	3900.6	4057.7	4359.3	4763.8	5481.6	6680.6	8416.9	9049.9	9002.9	8444.0
47.5°	3798.5	3801.3	3967.4	4312.3	4868.5	5715.4	7041.8	7654.0	8202.0	9360.5	8743.8
50°	3668.5	3684.8	3853.6	4241.0	4920.9	5933.9	7354.2	7989.0	8054.0	8407.0	9037.2
52.5°	3452.7	3423.8	3731.7	4158.8	4957.9	6092.8	7652.2	8310.4	8371.8	8243.6	9336.1
55°	1960.2	2432.4	3579.1	4063.1	4968.7	6188.6	7883.3	8676.1	8771.8	8650.8	9579.0
57.5°	1231.6	1269.5	3100.6	3809.4	4877.5	6248.1	8166.8	9178.1	9319.9	9031.8	9763.2
60°	436.1	470.4	1507.9	1748.9	3998.1	6083.8	8598.4	9769.5	9816.5	9390.3	9898.6
62.5°	46.0	60.5	1022.1	1283.9	3104.2	5614.3	8896.4	10245.3	10202.9	9655.7	9971.8
65°	16.3	22.6	898.4	1148.5	2889.3	5468.0	8994.8	10448.5	10447.6	9825.5	9919.4
67.5°	12.6	17.2	781.0	997.7	2578.7	5154.7	8831.4	10601.1	10586.6	9993.4	9781.2
69°	12.6	18.1	703.4	899.3	2353.9	4855.0	8705.0	10681.4	10732.9	9996.1	9531.1
70°	12.6	18.1	653.7	830.7	2170.6	4580.5	8523.5	10620.0	10646.2	9909.5	9272.0
72.5°	12.6	18.1	506.5	642.9	1650.5	3525.9	7467.1	9677.4	9727.1	9148.3	8333.0
75°	12.6	18.1	356.6	467.7	1083.5	2365.6	5945.7	8060.3	8194.8	7731.6	6827.8
77.5°	12.6	18.1	213.1	319.6	679.9	1298.4	4091.1	6177.7	6482.0	6050.4	4880.2
80°	12.6	17.2	100.2	174.3	387.3	688.0	1874.4	3803.1	4199.4	3785.0	2552.5
82.5°	12.6	17.2	82.2	125.5	195.9	342.2	732.3	1246.0	1223.4	1098.8	822.6
85°	11.7	15.3	67.7	92.1	140.9	216.7	408.1	507.4	484.0	428.0	430.7
87.5°	8.1	9.0	23.5	41.5	56.9	107.4	197.7	214.9	219.4	183.3	192.3
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°	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3	4386.3
2.5°	4434.2	4439.6	4465.8	4512.8	4511.8	4562.4	4548.9	4666.2	4670.8	4669.0	4678.0
5°	4474.8	4505.5	4563.3	4663.5	4721.3	4797.2	4782.7	4901.0	4908.2	4898.3	4923.6
7.5°	4545.3	4583.2	4678.0	4801.7	4817.0	4912.7	4892.9	4988.6	4984.1	4966.0	5009.4
10°	4644.6	4689.7	4775.5	4845.9	4890.2	4946.1	4924.5	5005.7	4990.4	4970.5	5012.1
12.5°	4745.7	4767.4	4815.2	4894.7	4898.3	4910.9	4885.7	4951.6	4934.4	4904.6	4948.0
15°	4842.3	4845.0	4836.9	4873.0	4835.1	4843.2	4788.1	4829.7	4799.9	4786.3	4814.3
17.5°	4967.8	4935.3	4877.5	4862.2	4772.8	4734.9	4653.6	4651.8	4599.4	4580.5	4599.4
20°	5118.6	5048.2	4914.5	4787.2	4632.8	4555.2	4417.0	4380.0	4337.6	4297.0	4319.5
22.5°	5327.2	5190.8	4960.6	4723.1	4467.6	4315.0	4145.3	4040.5	3961.1	3882.5	3906.0
25°	5564.6	5374.1	5025.6	4613.9	4269.9	3999.9	3779.6	3600.8	3487.0	3372.4	3423.8
27.5°	5886.1	5623.3	5065.3	4532.6	4012.5	3650.5	3299.2	3066.3	2948.0	2865.8	2839.7
30°	6260.8	5945.7	5136.7	4372.8	3710.1	3220.7	2774.6	2514.6	2389.1	2350.3	2366.5
32.5°	6717.7	6337.5	5282.0	4239.2	3403.1	2764.7	2244.6	2041.5	1951.2	1944.9	1943.1
35°	7328.9	6837.7	5406.6	4031.5	2996.8	2232.9	1786.0	1618.0	1614.4	1611.7	1618.0
37.5°	7798.4	7347.0	5539.4	3828.3	2514.6	1743.5	1428.4	1326.4	1315.5	1347.1	1355.3
40°	8168.6	7711.8	5738.0	3485.2	1949.4	1302.0	1097.0	1059.1	1135.9	1205.4	1219.8
42.5°	8502.7	8018.8	5781.3	3119.6	1420.3	999.5	909.2	972.4	1090.7	1170.2	1185.5
45°	8816.0	8341.1	5616.1	2576.0	1015.8	846.9	865.0	959.8	1092.5	1177.4	1186.4
47.5°	9158.2	8556.9	5437.3	2071.3	835.2	811.7	856.0	964.3	1103.4	1189.1	1193.6
50°	9384.0	8711.3	4990.4	1619.8	782.8	790.0	852.3	974.2	1105.2	1166.6	1170.2
52.5°	9476.1	8835.0	4585.9	1296.6	756.6	773.8	856.9	991.4	1100.6	1135.0	1133.2
55°	9533.8	8891.9	4238.3	1079.0	733.2	761.2	865.0	1004.0	1110.6	1145.8	1145.8
57.5°	9496.8	8764.6	3980.0	919.2	709.7	752.1	874.9	1023.0	1204.5	1266.8	1260.5
60°	9469.7	8526.2	3613.5	811.7	681.7	742.2	887.6	1088.9	1404.9	1468.1	1447.4
62.5°	9329.8	8324.8	3216.2	743.1	650.1	736.8	898.4	1177.4	1432.9	1429.3	1388.7
65°	8973.1	7914.9	2589.5	673.6	617.6	729.6	902.0	1216.2	1318.3	1261.4	1249.6
67.5°	8467.5	7323.5	2043.3	604.0	581.5	714.2	931.8	1170.2	1254.1	1205.4	1187.3
69°	8137.0	6885.6	1697.5	560.7	558.0	701.6	943.5	1165.7	1230.7	1175.6	1152.1
70°	7870.7	6506.4	1465.4	532.7	539.9	691.6	931.8	1164.8	1220.7	1152.1	1125.9
72.5°	6727.6	5271.2	946.3	465.9	486.7	665.4	887.6	1135.0	1200.0	1154.8	1118.7
75°	5213.4	3837.4	612.2	402.7	430.7	621.2	843.3	1116.0	1218.9	1136.8	1059.1
77.5°	3345.3	2053.2	474.0	338.6	370.2	558.9	763.9	1039.3	1183.7	1109.7	1009.5
80°	1457.3	762.1	365.7	274.5	299.8	454.2	655.5	923.7	1122.3	1114.2	1046.5
82.5°	618.5	491.2	281.7	210.4	238.4	335.9	513.8	791.9	991.4	1030.2	1104.3
85°	350.3	294.3	187.8	144.5	177.0	247.4	365.7	607.7	807.2	894.8	957.1
87.5°	150.8	122.8	86.7	77.7	100.2	128.2	157.1	285.3	430.7	525.5	565.2
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)