

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: P232720

Luminaire Tested: **CTN-8-3-D-E1-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232720
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-8-3-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: 30880 lumens
Efficiency: N/A
Efficacy: 136.6 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

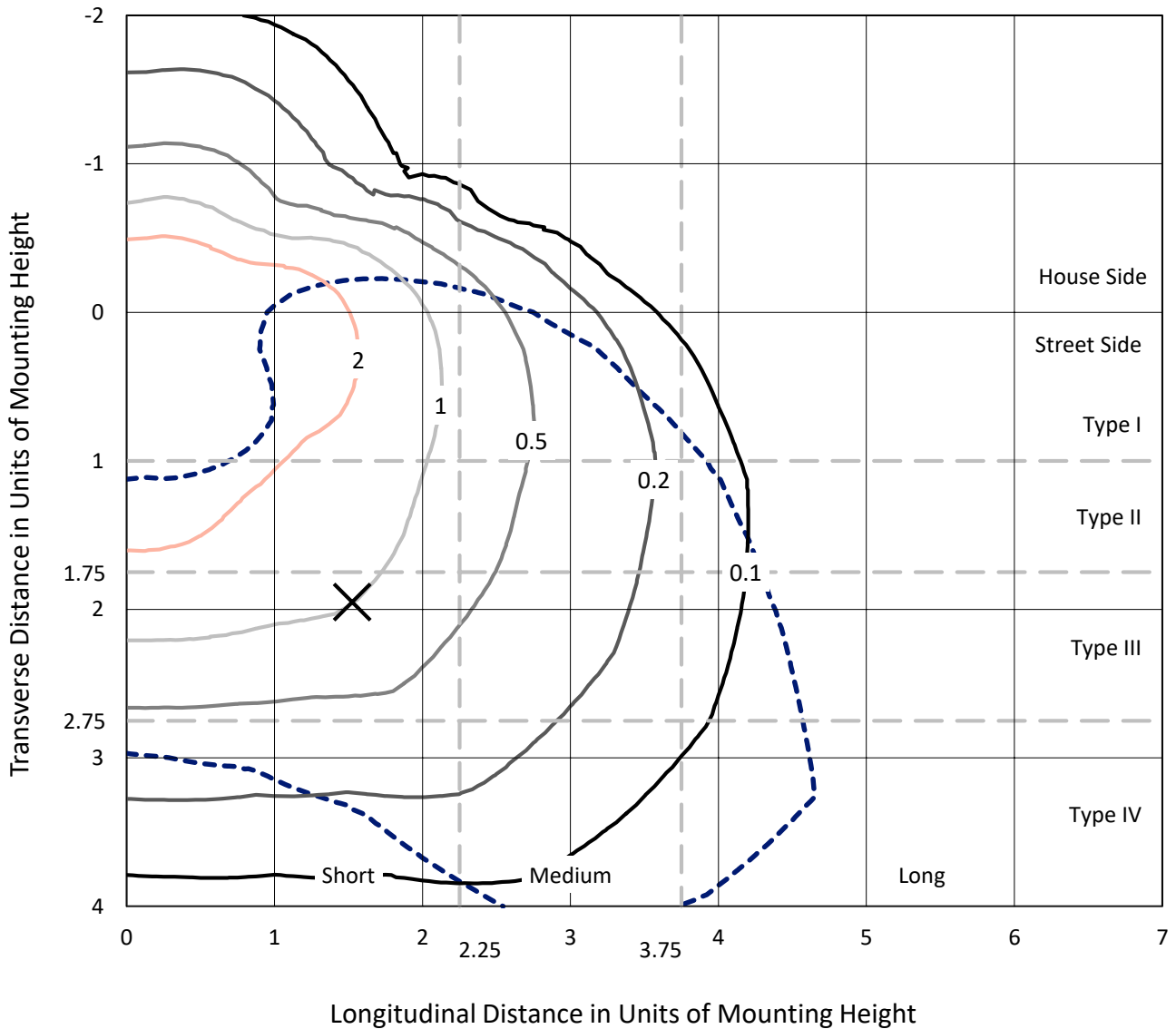
Input Watts (W): 226
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

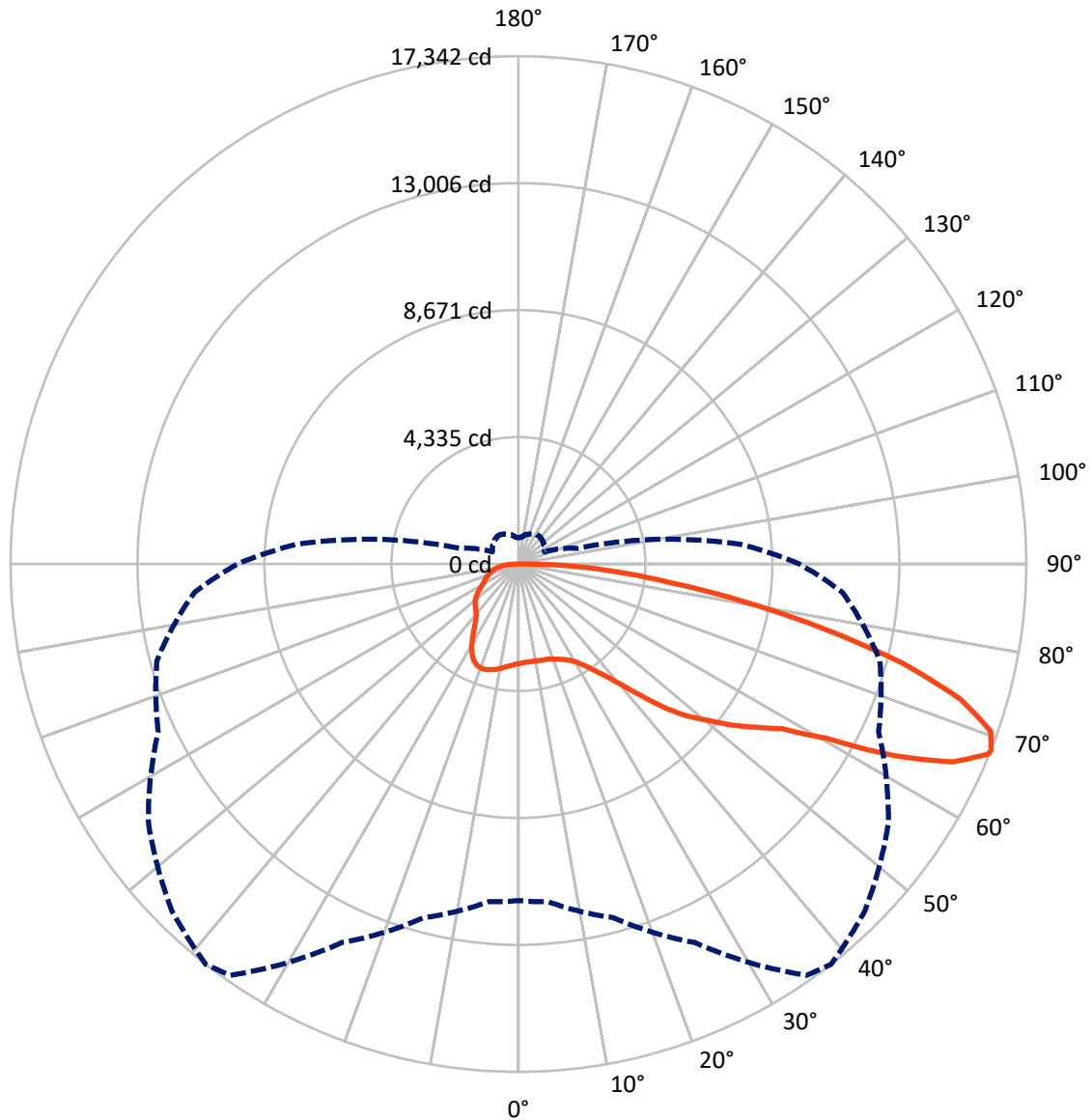
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.9 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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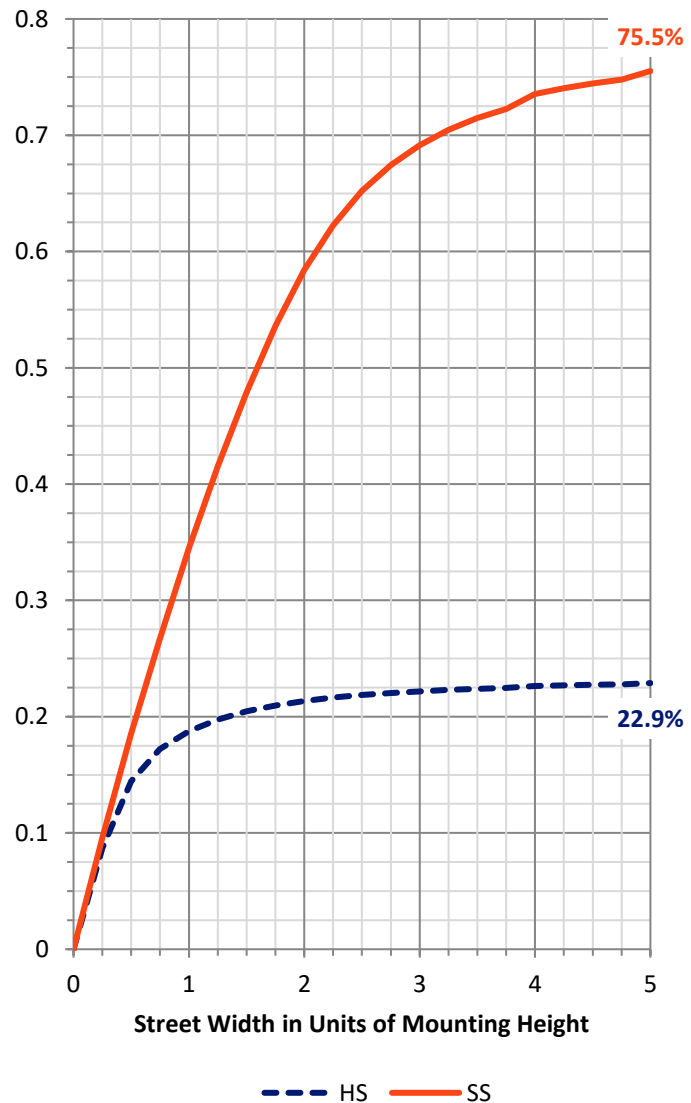
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7206.7	0.0	7206.7
	% Fixture	23.3	0.0	23.3
Street Side	Lumens	23673.3	0.0	23673.3
	% Fixture	76.7	0.0	76.7
Total	Lumens	30880.0	0.0	30880.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.0	1.1
10°-20°	1015.6	3.3
20°-30°	1725.4	5.6
30°-40°	2612.8	8.5
40°-50°	4321.6	14.0
50°-60°	6225.0	20.2
60°-70°	7850.6	25.4
70°-80°	5587.4	18.1
80°-90°	1212.8	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°	30880.0	100.0
0°-180°	30880.0	100.0



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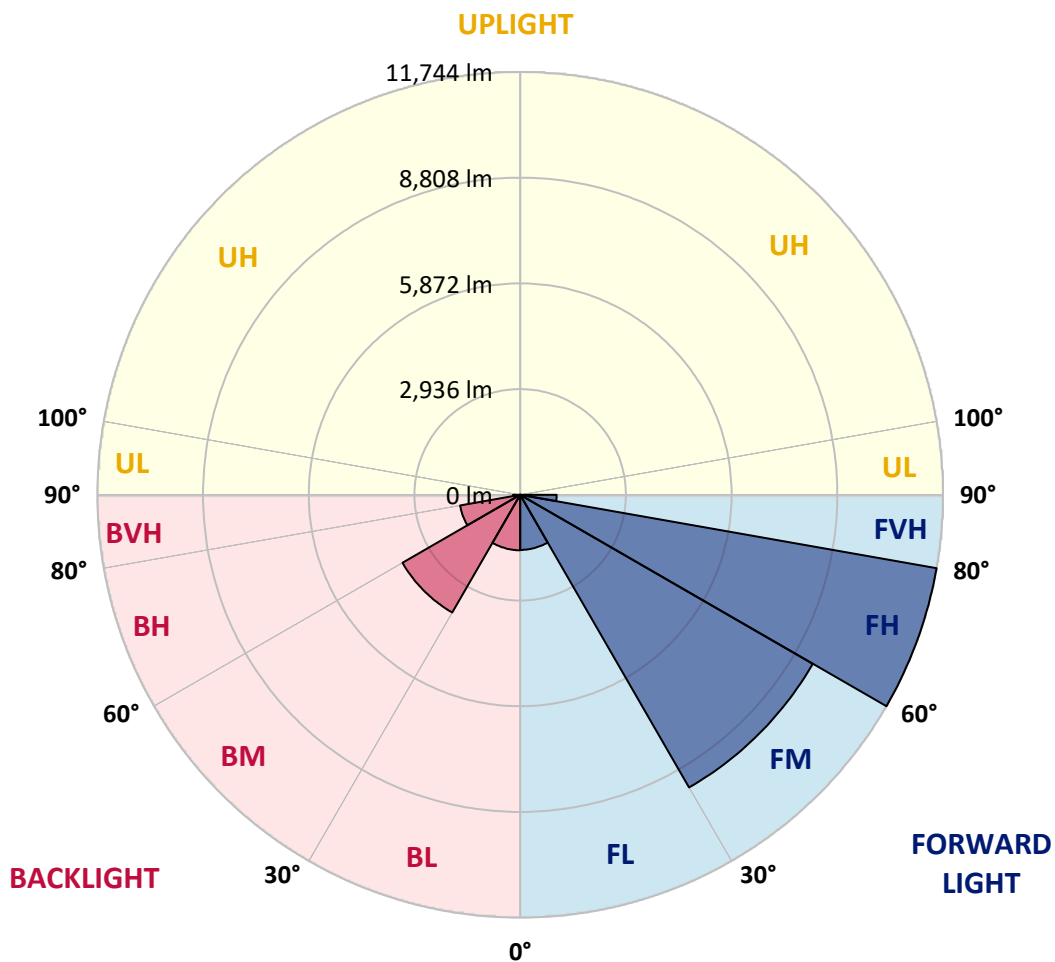
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1530.0	5.0			
FM	(30°-60°)	9385.4	30.4			
FH	(60°-80°)	11744.2	38.0			G4/12000
FVH	(80°-90°)	1013.8	3.3			G5
BL	(0°-30°)	1540.0	5.0	B3/2500		
BM	(30°-60°)	3773.9	12.2	B3/5000		
BH	(60°-80°)	1693.8	5.5	B3/2500		G3/2500
BVH	(80°-90°)	199.0	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9
2.5°	3389.9	3395.9	3391.9	3389.9	3363.8	3369.8	3379.8	3365.8	3399.9	3397.9	3417.9
5°	3357.7	3360.8	3361.8	3370.8	3345.7	3358.8	3370.8	3361.8	3397.9	3387.8	3415.9
7.5°	3348.7	3347.7	3348.7	3365.8	3338.7	3358.8	3372.8	3369.8	3408.9	3400.9	3435.0
10°	3325.6	3326.7	3329.7	3348.7	3334.7	3361.8	3386.8	3399.9	3452.1	3445.0	3484.2
12.5°	3285.5	3293.5	3304.6	3336.7	3339.7	3375.8	3412.9	3439.0	3507.2	3513.2	3562.4
15°	3250.4	3264.5	3283.5	3326.7	3344.7	3385.8	3433.0	3481.1	3570.4	3597.5	3659.7
17.5°	3261.4	3282.5	3307.6	3351.7	3364.8	3407.9	3461.1	3525.3	3635.6	3693.8	3774.1
20°	3329.7	3343.7	3364.8	3405.9	3423.0	3466.1	3509.2	3572.4	3715.9	3810.2	3909.5
22.5°	3414.9	3435.0	3449.0	3474.1	3494.2	3532.3	3577.5	3639.7	3809.2	3927.6	4064.0
25°	3506.2	3516.3	3536.3	3553.4	3578.5	3608.6	3659.7	3736.0	3915.5	4061.0	4251.6
27.5°	3590.5	3595.5	3633.6	3647.7	3696.8	3718.9	3759.0	3860.4	4054.0	4233.6	4468.3
30°	3713.9	3723.9	3753.0	3786.1	3858.4	3880.4	3921.6	4027.9	4238.6	4468.3	4750.2
32.5°	3947.6	3973.7	3969.7	4004.8	4090.1	4119.2	4175.4	4313.8	4543.5	4807.4	5142.5
35°	4421.2	4458.3	4412.1	4365.0	4410.1	4449.2	4535.5	4738.2	5022.1	5457.5	5788.5
37.5°	5196.6	5233.8	5069.2	4918.7	4820.4	4851.5	4968.9	5255.8	5690.2	6446.6	6815.8
40°	6102.5	6142.7	5913.9	5643.1	5421.4	5409.3	5445.4	5810.6	6437.6	7547.2	7835.1
42.5°	6892.1	6997.4	6698.4	6464.7	6177.8	6129.6	6042.3	6411.5	7228.1	8566.4	8728.9
45°	7659.5	7761.8	7526.1	7364.6	7071.6	6993.4	6827.9	7051.6	8003.6	9458.3	9465.3
47.5°	8363.8	8446.0	8172.2	8068.8	7779.9	7745.8	7576.3	7732.8	8721.9	10213.7	10071.2
50°	9151.3	9237.6	8801.2	8673.8	8441.0	8394.9	8339.7	8452.1	9545.6	10864.8	10585.9
52.5°	10114.4	10082.3	9543.6	9251.6	9128.2	9139.3	9077.1	9201.5	10419.4	11416.5	10991.2
55°	11267.1	11102.5	10510.6	10068.2	9784.3	9838.5	9757.2	9939.8	11283.1	11882.0	11284.1
57.5°	11922.2	11967.3	11911.1	11342.3	10620.0	10612.0	10483.6	10659.1	12037.5	12262.3	11462.7
60°	12877.2	13063.8	13135.1	12981.6	12333.5	12077.7	11434.6	11394.5	12674.6	12590.3	11554.0
62.5°	13481.2	13568.4	13996.8	14182.4	14391.1	14435.2	13413.9	12280.3	13145.1	12757.8	11592.1
65°	13192.2	13280.5	14081.1	14808.4	16046.4	16295.2	15970.1	13683.8	13463.1	12795.0	11464.7
67.5°	11711.5	11819.8	12894.3	14385.1	17047.6	17315.4	16790.8	15302.0	13567.4	12772.9	11187.8
68°	11494.8	11575.1	12502.0	14261.7	17147.9	17341.5	16736.6	15424.4	13573.5	12779.9	11102.5
70°	9829.5	9970.9	10947.0	13139.1	16986.4	17109.8	16398.5	15356.2	13437.0	12665.5	10478.5
72.5°	7661.5	7857.2	8599.5	10912.9	15689.2	15789.6	15193.6	14603.8	13024.7	11872.0	8981.8
75°	5550.8	5718.3	6432.6	8422.0	13208.3	13564.4	13464.1	13570.4	11675.4	10059.2	6504.8
77.5°	3833.3	3976.7	4642.9	6284.1	10241.8	10692.2	11212.9	11488.8	9593.7	7462.9	3091.9
80°	2455.9	2566.2	3133.0	4425.2	7385.6	7809.0	8369.8	8655.7	6823.8	3754.0	548.8
82.5°	1443.6	1518.9	1906.1	2855.1	4977.9	5235.8	5506.6	5027.1	2738.8	718.3	346.1
85°	717.3	767.5	1005.2	1615.2	3094.9	3331.7	3422.0	2144.9	578.9	262.8	235.8
87.5°	321.0	335.1	431.4	727.3	1470.7	1550.0	1511.8	667.1	116.4	98.3	84.3
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°	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9	3401.9
2.5°	3419.9	3411.9	3409.9	3423.0	3408.9	3426.0	3421.0	3459.1	3464.1	3450.0	3473.1
5°	3425.0	3421.0	3424.0	3448.0	3443.0	3478.1	3487.2	3525.3	3525.3	3514.3	3538.3
7.5°	3448.0	3448.0	3457.1	3501.2	3501.2	3531.3	3541.3	3583.5	3582.5	3582.5	3604.5
10°	3506.2	3506.2	3525.3	3581.5	3567.4	3606.5	3611.6	3633.6	3628.6	3629.6	3652.7
12.5°	3592.5	3597.5	3630.6	3679.8	3670.8	3684.8	3674.8	3670.8	3634.6	3634.6	3649.7
15°	3691.8	3712.9	3758.0	3803.2	3773.1	3768.1	3710.9	3660.7	3583.5	3550.4	3567.4
17.5°	3821.2	3857.3	3909.5	3941.6	3884.4	3843.3	3740.0	3609.6	3484.2	3410.9	3412.9
20°	3964.7	4012.8	4077.1	4088.1	4003.8	3901.5	3728.9	3524.3	3308.6	3192.2	3184.2
22.5°	4124.2	4184.4	4258.6	4215.5	4078.1	3911.5	3664.7	3392.9	3102.9	2907.3	2904.3
25°	4318.8	4384.0	4431.2	4310.8	4095.1	3860.4	3553.4	3188.2	2830.1	2619.4	2605.3
27.5°	4566.6	4609.8	4574.6	4360.0	4043.9	3738.0	3364.8	2925.4	2546.2	2355.5	2334.5
30°	4860.6	4855.5	4664.9	4345.9	3940.6	3544.3	3108.0	2640.5	2313.4	2149.9	2130.8
32.5°	5217.7	5145.5	4752.2	4278.7	3774.1	3290.5	2803.0	2403.7	2144.9	1979.3	1959.3
35°	5787.5	5583.9	4865.6	4177.4	3542.3	2984.6	2515.1	2221.1	2014.4	1824.8	1785.7
37.5°	6671.4	6242.0	5054.2	4071.0	3276.5	2684.6	2300.4	2088.7	1912.1	1697.4	1651.3
40°	7580.3	7006.4	5341.1	3956.7	3027.7	2457.9	2179.0	2026.5	1849.9	1643.3	1597.1
42.5°	8369.8	7719.7	5685.2	3813.2	2772.9	2279.3	2116.8	2006.4	1829.9	1633.2	1589.1
45°	9067.0	8360.8	6044.4	3646.7	2506.0	2134.8	2063.6	1978.3	1799.8	1610.2	1570.0
47.5°	9647.9	8871.4	6360.4	3462.1	2244.2	2028.5	2011.4	1912.1	1742.6	1560.0	1525.9
50°	10097.3	9234.6	6572.0	3256.4	2020.5	1945.2	1936.2	1810.8	1646.3	1471.7	1437.6
52.5°	10416.3	9478.3	6695.4	3179.2	1844.9	1848.9	1833.9	1700.4	1540.9	1367.4	1340.3
55°	10619.0	9645.9	6665.3	3079.9	1667.3	1713.5	1715.5	1619.2	1478.7	1310.2	1288.1
57.5°	10696.2	9638.9	6487.8	2582.3	1494.8	1551.0	1578.1	1563.0	1438.6	1274.1	1256.0
60°	10654.1	9525.5	6109.6	1892.1	1316.2	1392.5	1458.7	1455.7	1350.3	1194.8	1175.8
62.5°	10583.9	9262.7	5368.2	1354.3	1181.8	1280.1	1360.4	1333.3	1232.9	1096.5	1083.5
65°	10332.1	8799.2	4150.3	1083.5	1125.6	1216.9	1283.1	1237.0	1138.6	996.2	989.2
67.5°	9775.3	7872.2	2422.8	988.2	1084.5	1163.7	1210.9	1153.7	1062.4	924.0	911.9
68°	9586.7	7634.4	2060.6	979.1	1076.4	1150.7	1193.8	1133.6	1044.3	909.9	897.9
70°	8634.6	6187.8	983.1	942.0	1041.3	1090.5	1115.6	1060.4	973.1	853.7	845.7
72.5°	6720.5	3733.0	657.1	885.8	973.1	1020.3	1026.3	940.0	857.7	769.5	764.4
75°	3970.7	1239.0	611.0	802.6	878.8	944.0	961.1	874.8	783.5	681.2	679.2
77.5°	967.1	480.5	576.8	716.3	796.6	859.8	872.8	809.6	729.3	614.0	610.0
80°	398.3	399.3	537.7	593.9	683.2	744.4	763.4	707.3	635.0	560.8	552.8
82.5°	331.1	337.1	456.5	438.4	546.8	618.0	637.0	597.9	572.8	492.6	484.6
85°	235.8	299.0	303.0	294.9	383.2	440.4	536.7	517.7	490.6	422.4	382.2
87.5°	110.4	174.6	131.4	126.4	194.6	260.8	307.0	322.0	278.9	216.7	200.6
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)