

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: P232729

Luminaire Tested: **CTN-10-3-D-E1-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232729
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-10-3-D-E1-T4-7050
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 5000K LEDS AND TYPE IV OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31542 lumens
Efficiency: N/A
Efficacy: 148.8 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): 212
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

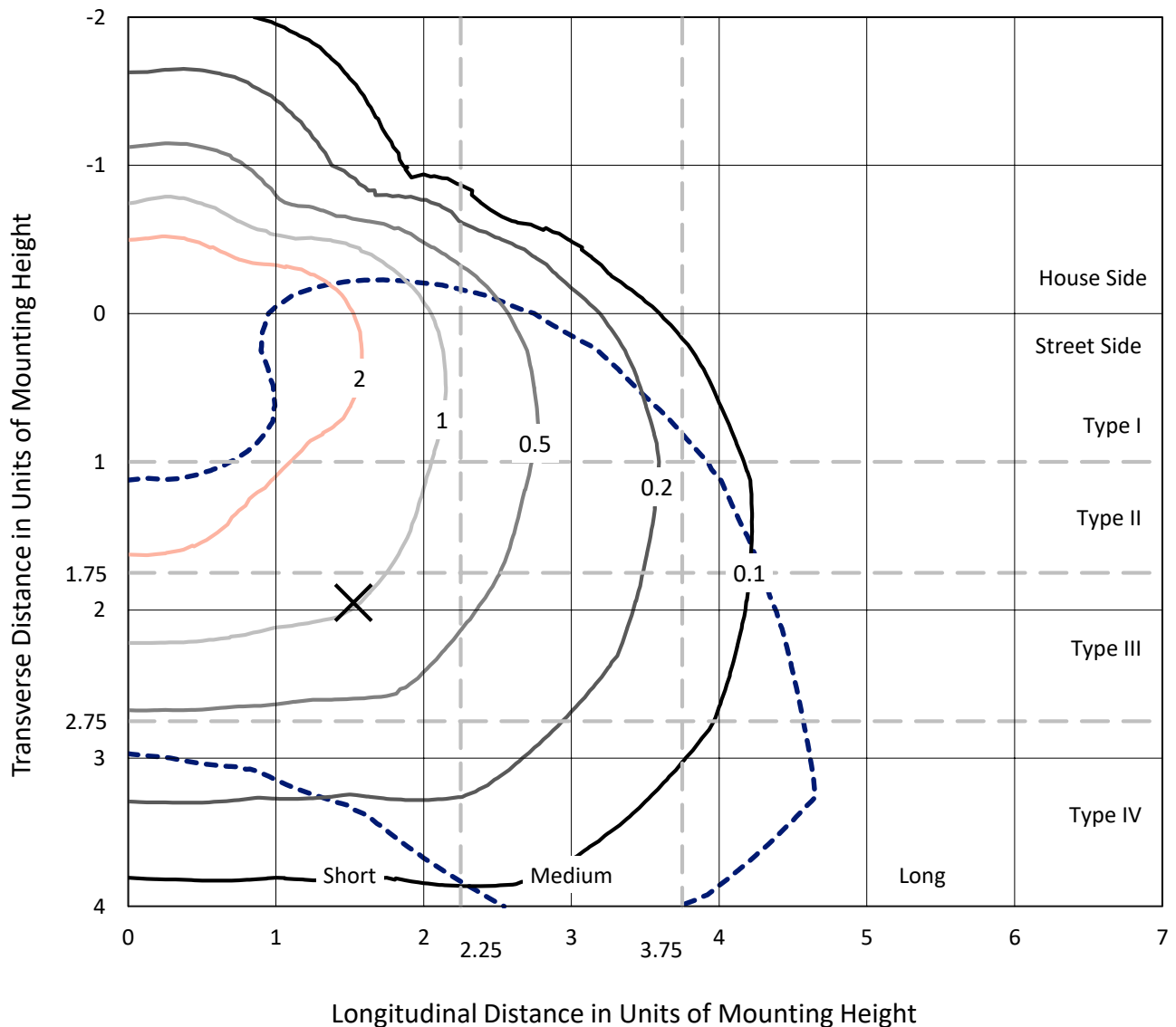


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

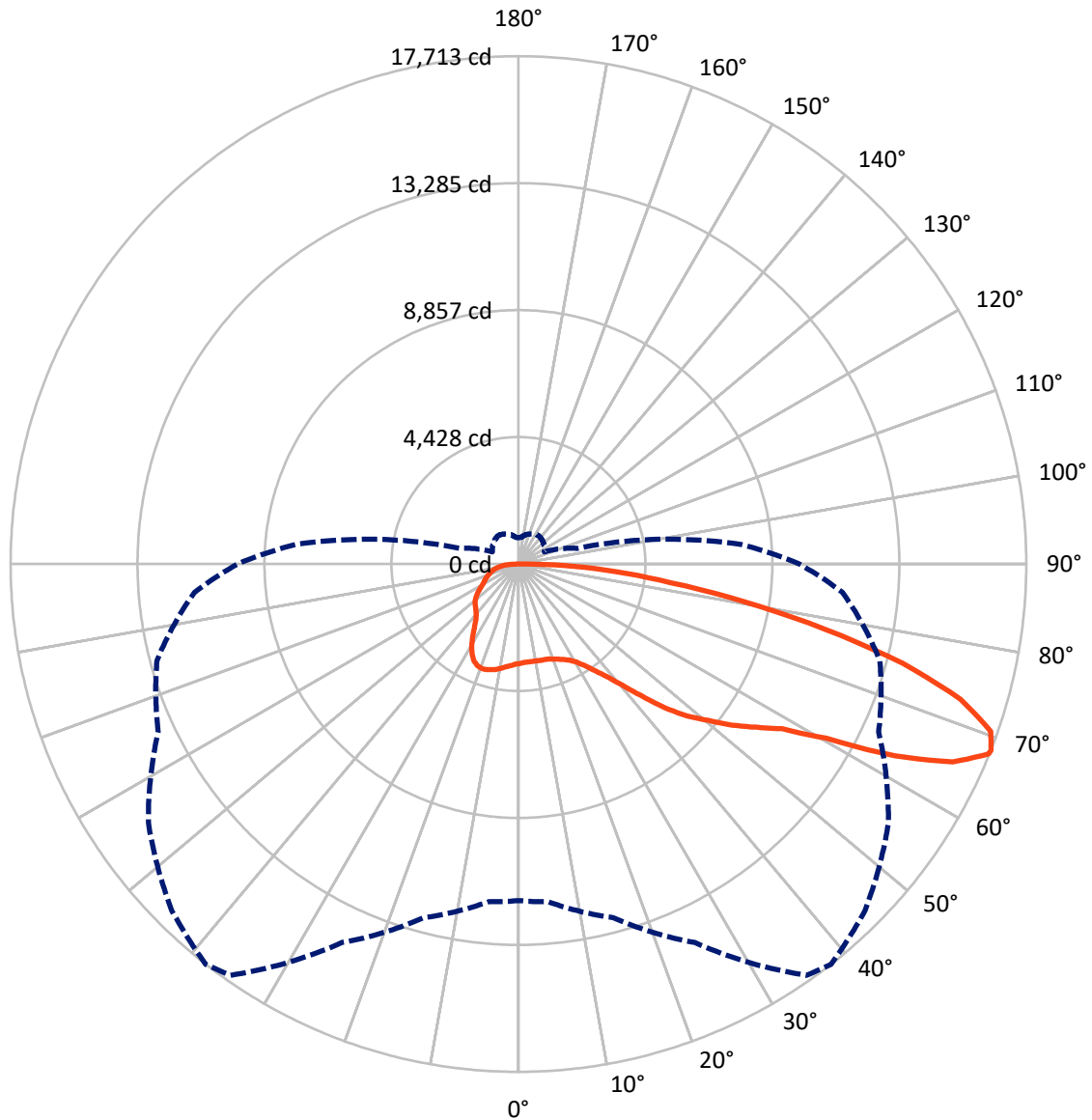


Based on 30 foot mounting height. Maximum calculated value = 4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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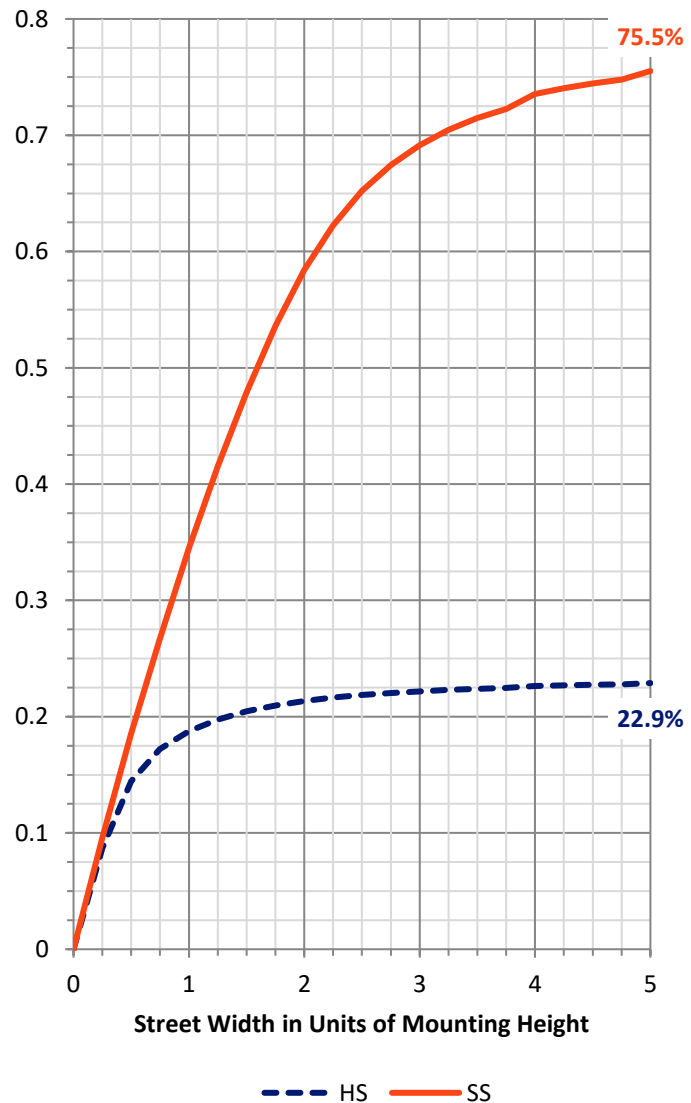
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7361.2	0.0	7361.2
	% Fixture	23.3	0.0	23.3
Street Side	Lumens	24180.8	0.0	24180.8
	% Fixture	76.7	0.0	76.7
Total	Lumens	31542.0	0.0	31542.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.0	1.1
10°-20°	1037.3	3.3
20°-30°	1762.4	5.6
30°-40°	2668.8	8.5
40°-50°	4414.2	14.0
50°-60°	6358.4	20.2
60°-70°	8018.9	25.4
70°-80°	5707.2	18.1
80°-90°	1238.8	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°	31542.0	100.0
0°-180°	31542.0	100.0



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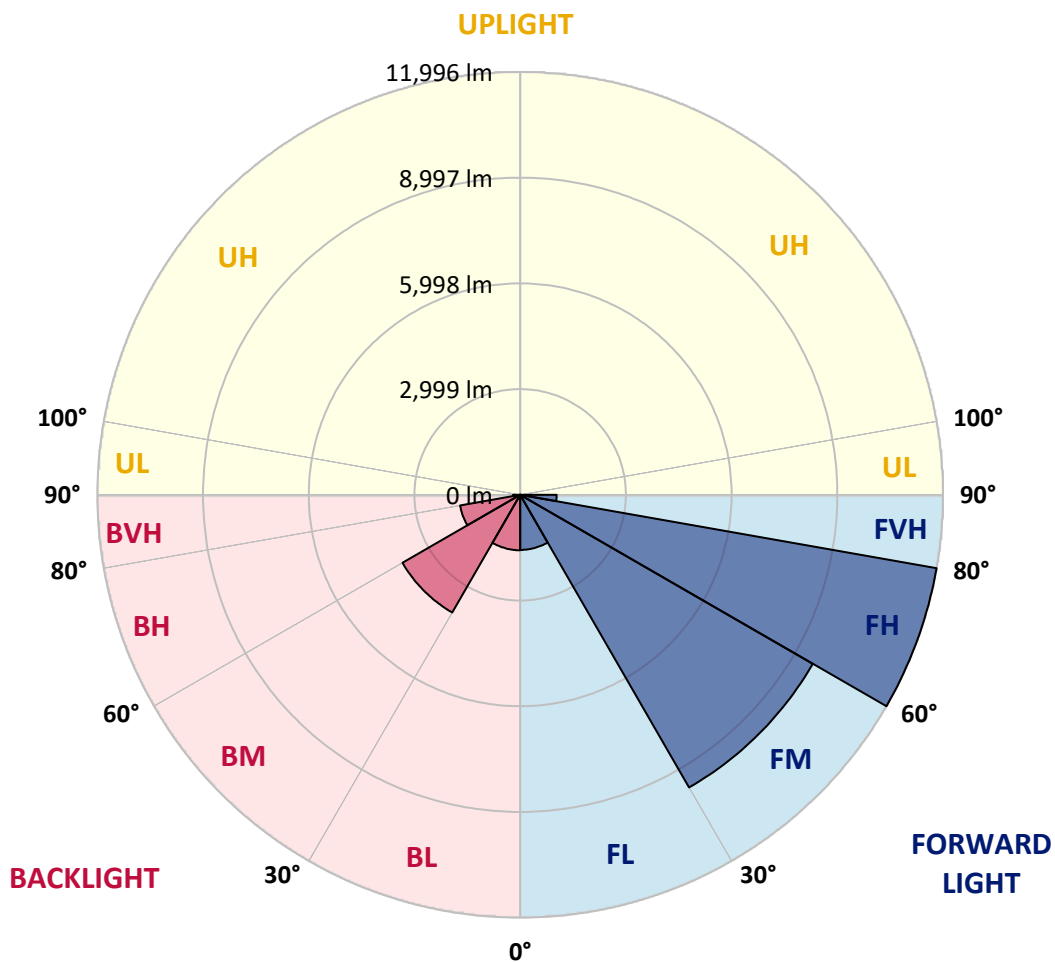
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1562.8	5.0			
FM	(30°-60°)	9586.6	30.4			
FH	(60°-80°)	11995.9	38.0			G4/12000
FVH	(80°-90°)	1035.5	3.3			G5
BL	(0°-30°)	1573.0	5.0	B3/2500		
BM	(30°-60°)	3854.8	12.2	B3/5000		
BH	(60°-80°)	1730.1	5.5	B3/2500		G3/2500
BVH	(80°-90°)	203.3	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°	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8
2.5°	3462.5	3468.7	3464.6	3462.5	3435.9	3442.0	3452.3	3437.9	3472.8	3470.7	3491.2
5°	3429.7	3432.8	3433.8	3443.1	3417.4	3430.8	3443.1	3433.8	3470.7	3460.5	3489.2
7.5°	3420.5	3419.5	3420.5	3437.9	3410.3	3430.8	3445.1	3442.0	3482.0	3473.8	3508.6
10°	3396.9	3398.0	3401.0	3420.5	3406.2	3433.8	3459.4	3472.8	3526.1	3518.9	3558.8
12.5°	3356.0	3364.2	3375.4	3408.2	3411.3	3448.2	3486.1	3512.7	3582.4	3588.6	3638.8
15°	3320.1	3334.4	3353.9	3398.0	3416.4	3458.4	3506.6	3555.8	3647.0	3674.6	3738.2
17.5°	3331.4	3352.9	3378.5	3423.6	3436.9	3481.0	3535.3	3600.9	3713.6	3773.0	3855.0
20°	3401.0	3415.4	3436.9	3478.9	3496.3	3540.4	3584.5	3649.0	3795.6	3891.9	3993.3
22.5°	3488.1	3508.6	3523.0	3548.6	3569.1	3608.0	3654.1	3717.7	3890.9	4011.8	4151.1
25°	3581.4	3591.6	3612.1	3629.6	3655.2	3685.9	3738.2	3816.1	3999.5	4148.1	4342.8
27.5°	3667.5	3672.6	3711.5	3725.9	3776.1	3798.6	3839.6	3943.1	4140.9	4324.3	4564.1
30°	3793.5	3803.8	3833.5	3867.3	3941.1	3963.6	4005.6	4114.2	4329.4	4564.1	4852.0
32.5°	4032.3	4058.9	4054.8	4090.7	4177.8	4207.5	4264.9	4406.3	4640.9	4910.5	5252.7
35°	4515.9	4553.8	4506.7	4458.5	4504.7	4544.6	4632.8	4839.7	5129.7	5574.5	5912.6
37.5°	5308.0	5346.0	5177.9	5024.2	4923.8	4955.5	5075.4	5368.5	5812.2	6584.8	6961.9
40°	6233.4	6274.4	6040.7	5764.0	5537.6	5525.3	5562.2	5935.2	6575.6	7709.0	8003.1
42.5°	7039.8	7147.4	6842.0	6603.3	6310.2	6261.0	6171.9	6549.0	7383.1	8750.1	8916.1
45°	7823.7	7928.2	7687.4	7522.5	7223.2	7143.3	6974.2	7202.7	8175.2	9661.0	9668.2
47.5°	8543.1	8627.1	8347.4	8241.8	7946.7	7911.9	7738.7	7898.5	8908.9	10432.7	10287.1
50°	9347.5	9435.6	8989.9	8859.7	8622.0	8574.8	8518.5	8633.3	9750.2	11097.7	10812.8
52.5°	10331.2	10298.4	9748.1	9450.0	9323.9	9335.2	9271.7	9398.7	10642.7	11661.3	11226.8
55°	11508.6	11340.6	10736.0	10284.1	9994.1	10049.4	9966.4	10152.9	11525.0	12136.8	11526.0
57.5°	12177.8	12223.9	12166.5	11585.5	10847.7	10839.5	10708.3	10887.6	12295.6	12525.1	11708.4
60°	13153.3	13343.9	13416.6	13259.9	12597.9	12336.6	11679.7	11638.8	12946.3	12860.2	11801.7
62.5°	13770.2	13859.3	14296.9	14486.4	14699.6	14744.7	13701.5	12543.6	13426.9	13031.3	11840.6
65°	13475.0	13565.2	14382.9	15125.9	16390.4	16644.5	16312.5	13977.2	13751.7	13069.3	11710.5
67.5°	11962.6	12073.2	13170.7	14693.4	17413.0	17686.6	17150.7	15630.0	13858.3	13046.7	11427.7
68°	11741.2	11823.2	12770.0	14567.4	17515.5	17713.3	17095.4	15755.0	13864.4	13053.9	11340.6
70°	10040.2	10184.7	11181.7	13420.7	17350.5	17476.6	16750.0	15685.4	13725.1	12937.1	10703.2
72.5°	7825.8	8025.6	8783.9	11146.9	16025.6	16128.0	15519.4	14916.8	13303.9	12126.5	9174.3
75°	5669.8	5840.9	6570.5	8602.5	13491.4	13855.2	13752.7	13861.4	11925.7	10274.9	6644.3
77.5°	3915.4	4062.0	4742.4	6418.8	10461.4	10921.4	11453.3	11735.1	9799.4	7622.9	3158.2
80°	2508.5	2621.2	3200.2	4520.0	7544.0	7976.4	8549.2	8841.3	6970.1	3834.5	560.5
82.5°	1474.6	1551.4	1947.0	2916.3	5084.7	5348.0	5624.7	5134.9	2797.5	733.7	353.5
85°	732.7	783.9	1026.8	1649.8	3161.3	3403.1	3495.3	2190.8	591.3	268.5	240.8
87.5°	327.9	342.3	440.6	742.9	1502.2	1583.2	1544.3	681.4	118.9	100.4	86.1
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°	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8	3474.8
2.5°	3493.3	3485.1	3483.0	3496.3	3482.0	3499.4	3494.3	3533.2	3538.4	3524.0	3547.6
5°	3498.4	3494.3	3497.4	3522.0	3516.8	3552.7	3561.9	3600.9	3600.9	3589.6	3614.2
7.5°	3522.0	3522.0	3531.2	3576.3	3576.3	3607.0	3617.3	3660.3	3659.3	3659.3	3681.8
10°	3581.4	3581.4	3600.9	3658.2	3643.9	3683.9	3689.0	3711.5	3706.4	3707.4	3731.0
12.5°	3669.5	3674.6	3708.5	3758.7	3749.4	3763.8	3753.5	3749.4	3712.6	3712.6	3727.9
15°	3771.0	3792.5	3838.6	3884.7	3854.0	3848.8	3790.4	3739.2	3660.3	3626.5	3643.9
17.5°	3903.2	3940.0	3993.3	4026.1	3967.7	3925.7	3820.2	3686.9	3558.8	3484.0	3486.1
20°	4049.7	4098.9	4164.5	4175.7	4089.7	3985.1	3808.9	3599.8	3379.5	3260.7	3252.5
22.5°	4212.6	4274.1	4349.9	4305.9	4165.5	3995.4	3743.3	3465.6	3169.5	2969.6	2966.6
25°	4411.4	4478.0	4526.2	4403.2	4182.9	3943.1	3629.6	3256.6	2890.7	2675.5	2661.2
27.5°	4664.5	4708.6	4672.7	4453.4	4130.6	3818.1	3436.9	2988.1	2600.7	2406.0	2384.5
30°	4964.8	4959.6	4764.9	4439.1	4025.1	3620.3	3174.6	2697.1	2363.0	2196.0	2176.5
32.5°	5329.6	5255.8	4854.1	4370.4	3855.0	3361.1	2863.1	2455.2	2190.8	2021.8	2001.3
35°	5911.6	5703.6	4969.9	4266.9	3618.3	3048.5	2569.0	2268.7	2057.6	1864.0	1824.0
37.5°	6814.4	6375.8	5162.5	4158.3	3346.7	2742.1	2349.7	2133.5	1953.1	1733.8	1686.7
40°	7742.8	7156.6	5455.6	4041.5	3092.6	2510.6	2225.7	2069.9	1889.6	1678.5	1631.4
42.5°	8549.2	7885.2	5807.1	3895.0	2832.3	2328.2	2162.2	2049.4	1869.1	1668.2	1623.2
45°	9261.4	8540.0	6173.9	3724.9	2559.7	2180.6	2107.8	2020.7	1838.3	1644.7	1603.7
47.5°	9854.7	9061.6	6496.7	3536.3	2292.3	2072.0	2054.6	1953.1	1779.9	1593.4	1558.6
50°	10313.8	9432.5	6712.9	3326.2	2063.8	1986.9	1977.7	1849.6	1681.6	1503.3	1468.4
52.5°	10639.7	9681.5	6839.0	3247.3	1884.5	1888.6	1873.2	1736.9	1574.0	1396.7	1369.0
55°	10846.6	9852.7	6808.2	3145.9	1703.1	1750.2	1752.3	1653.9	1510.4	1338.3	1315.7
57.5°	10925.5	9845.5	6626.9	2637.6	1526.8	1584.2	1611.9	1596.5	1469.4	1301.4	1282.9
60°	10882.5	9729.7	6240.5	1932.6	1344.4	1422.3	1489.9	1486.9	1379.3	1220.4	1201.0
62.5°	10810.8	9461.2	5483.3	1383.4	1207.1	1307.5	1389.5	1361.9	1259.4	1120.0	1106.7
65°	10553.6	8987.8	4239.3	1106.7	1149.7	1243.0	1310.6	1263.5	1163.1	1017.5	1010.4
67.5°	9984.9	8041.0	2474.7	1009.3	1107.7	1188.7	1236.8	1178.4	1085.2	943.8	931.5
68°	9792.2	7798.1	2104.8	1000.1	1099.5	1175.4	1219.4	1157.9	1066.7	929.4	917.1
70°	8819.8	6320.5	1004.2	962.2	1063.7	1113.9	1139.5	1083.1	994.0	872.0	863.8
72.5°	6864.6	3813.0	671.2	904.8	994.0	1042.1	1048.3	960.2	876.1	786.0	780.8
75°	4055.8	1265.5	624.1	819.8	897.7	964.3	981.7	893.6	800.3	695.8	693.7
77.5°	987.8	490.8	589.2	731.6	813.6	878.2	891.5	826.9	745.0	627.1	623.0
80°	406.8	407.8	549.2	606.6	697.8	760.3	779.8	722.4	648.6	572.8	564.6
82.5°	338.2	344.3	466.2	447.8	558.5	631.2	650.7	610.7	585.1	503.1	494.9
85°	240.8	305.4	309.5	301.3	391.4	449.9	548.2	528.8	501.1	431.4	390.4
87.5°	112.7	178.3	134.2	129.1	198.8	266.4	313.6	328.9	284.9	221.3	204.9
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)