

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: P232710

Luminaire Tested: **CTN-10-9-D-E1-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232710
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-19)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-10-9-D-E1-T3-7050
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 5000K LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 93690 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B5 - U0 - G5

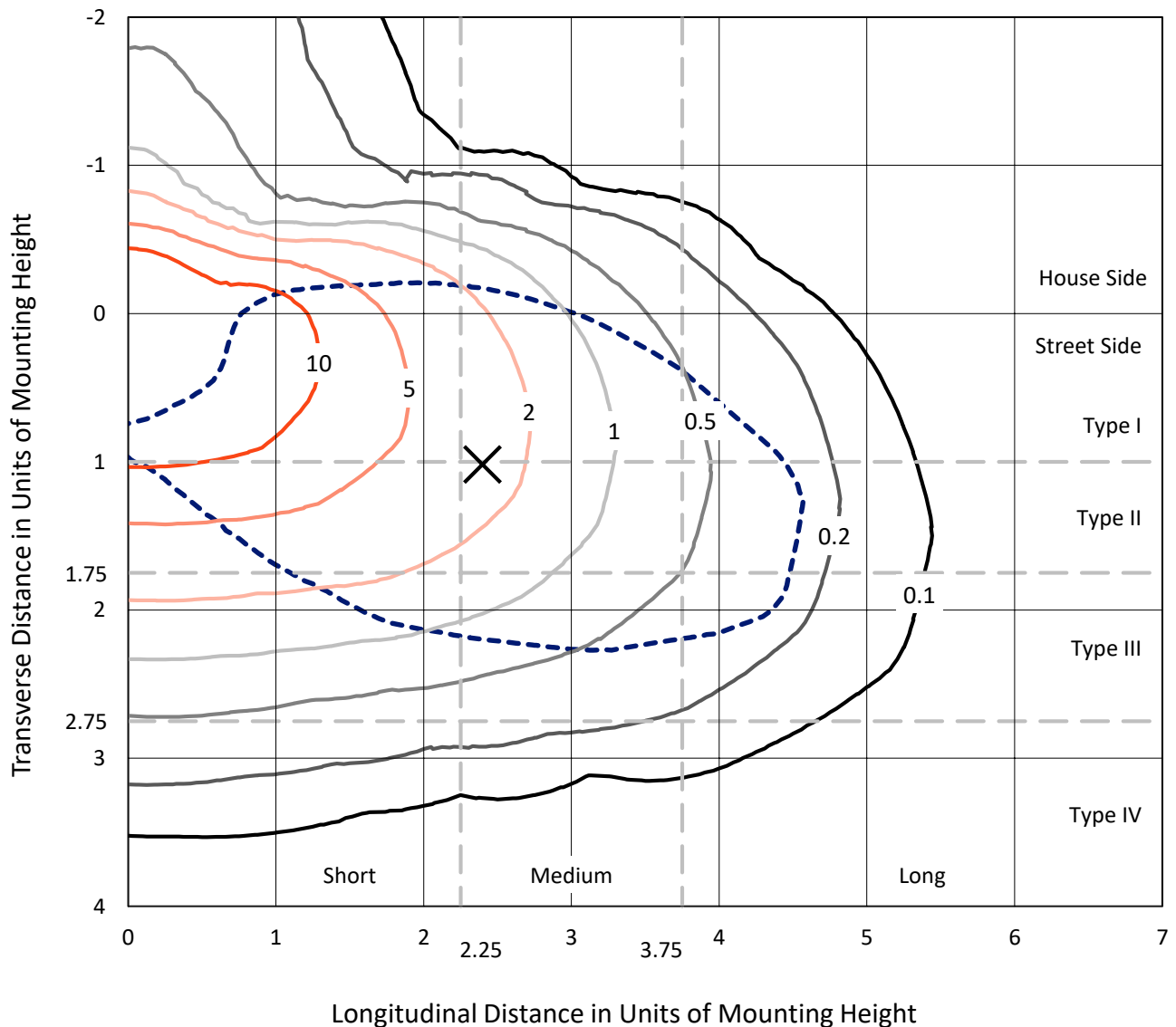
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

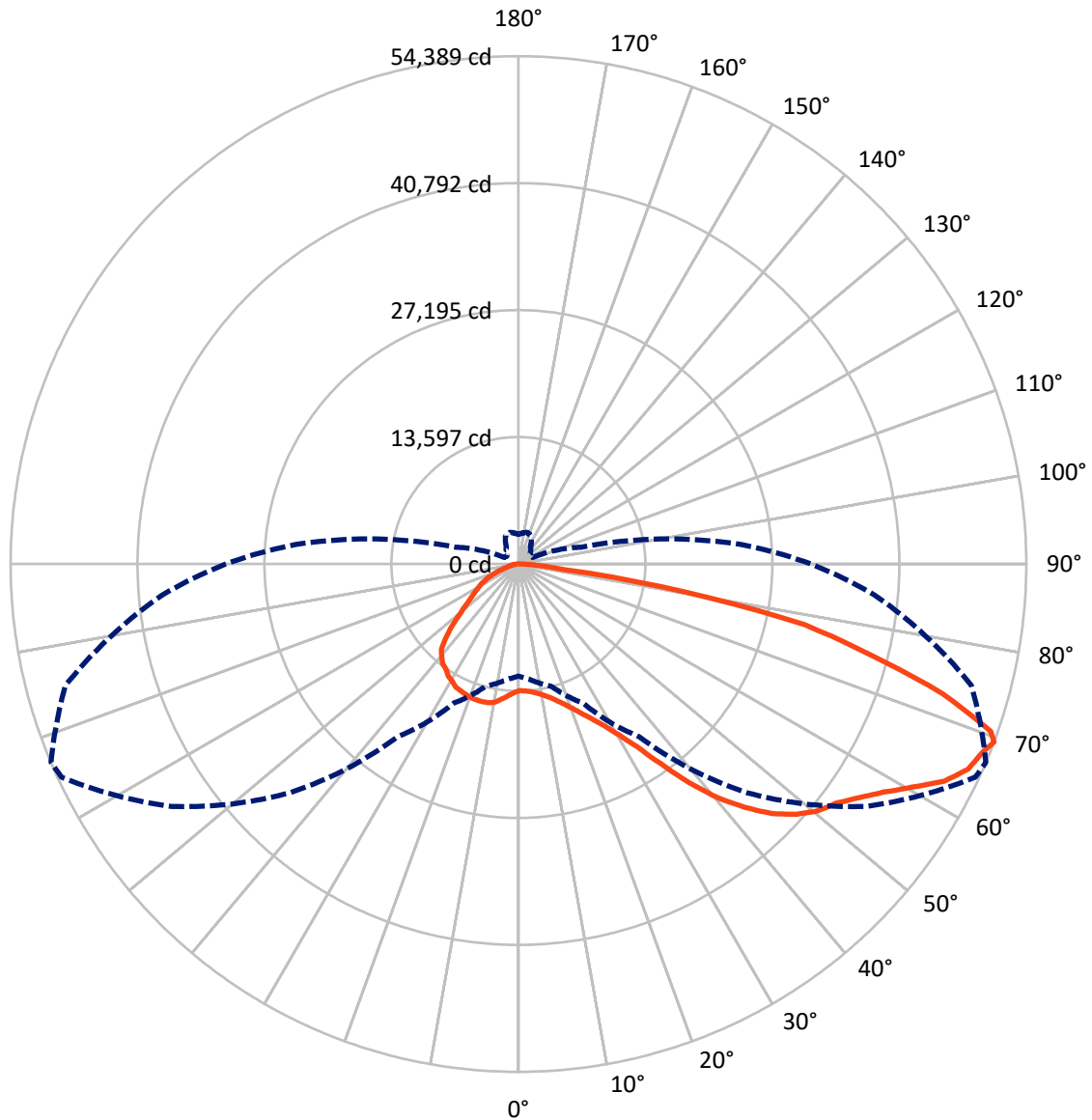


Based on 30 foot mounting height. Maximum calculated value = 17.9 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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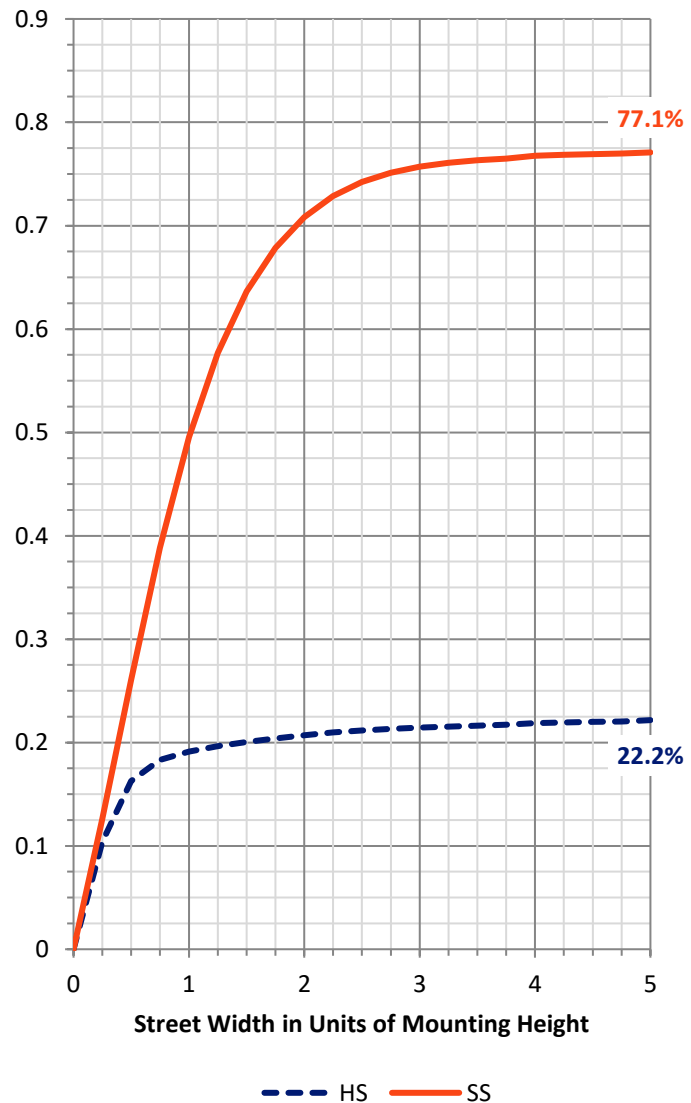
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	21312.5	0.0	21312.5
	% Fixture	22.7	0.0	22.7
Street Side	Lumens	72377.5	0.0	72377.5
	% Fixture	77.3	0.0	77.3
Total	Lumens	93690.0	0.0	93690.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1376.3	1.5
10°-20°	4420.4	4.7
20°-30°	7687.1	8.2
30°-40°	11579.6	12.4
40°-50°	15992.5	17.1
50°-60°	19087.1	20.4
60°-70°	20102.2	21.5
70°-80°	11792.1	12.6
80°-90°	1652.7	1.8
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°	93690.0	100.0
0°-180°	93690.0	100.0



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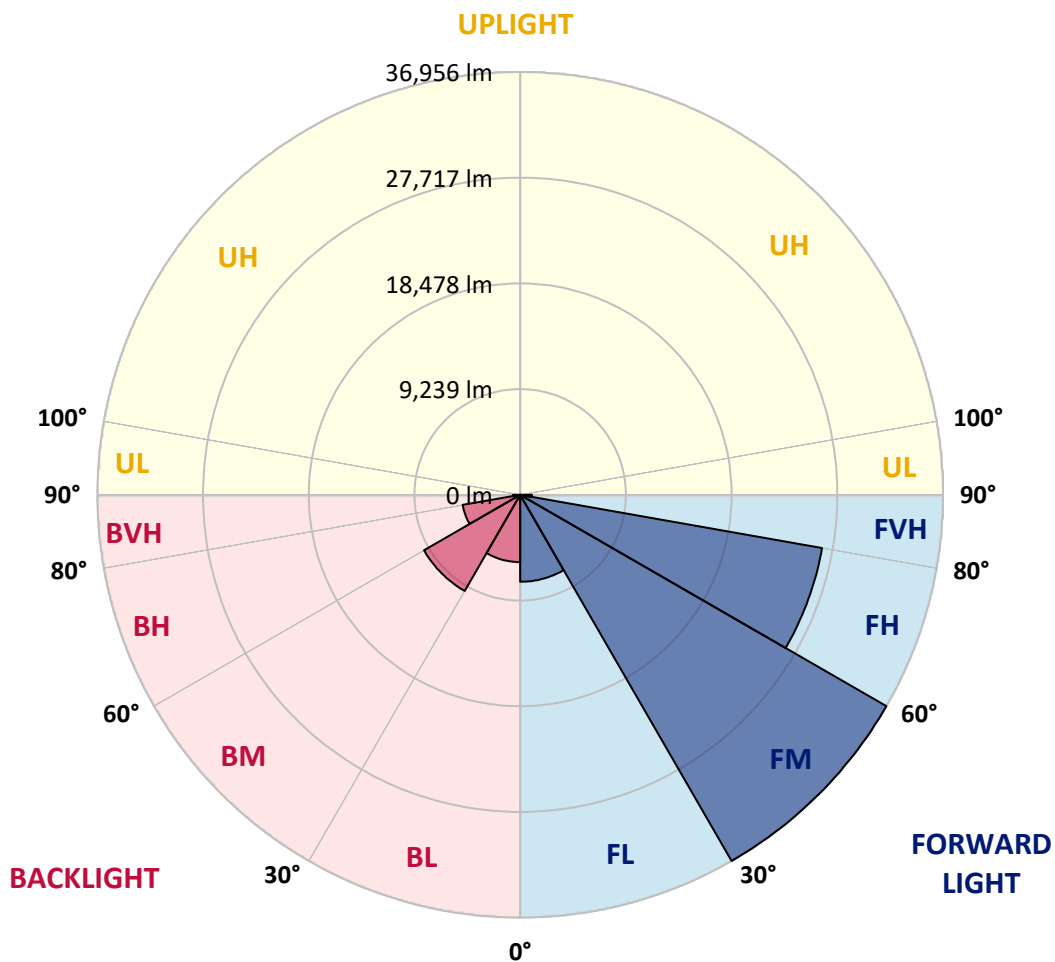
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	7602.8	8.1			
FM	(30°-60°)	36956.3	39.4			
FH	(60°-80°)	26791.3	28.6			G5
FVH	(80°-90°)	1027.1	1.1			G5
BL	(0°-30°)	5880.9	6.3	B5		
BM	(30°-60°)	9702.9	10.4	B5		
BH	(60°-80°)	5103.1	5.4	B5		G5
BVH	(80°-90°)	625.6	0.7			G4/750
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3
2.5°	13615.3	13633.3	13615.3	13585.3	13486.3	13531.3	13492.3	13618.3	13609.3	13561.3	13648.3
5°	13933.2	13954.1	13915.2	13891.2	13738.2	13759.2	13675.2	13744.2	13720.2	13639.3	13774.2
7.5°	14452.0	14473.0	14425.0	14392.0	14176.1	14128.1	13975.1	13996.1	13951.1	13822.2	13978.1
10°	15150.7	15168.7	15087.8	15006.8	14730.9	14613.9	14359.0	14317.0	14251.0	14125.1	14284.0
12.5°	15903.5	15930.5	15831.5	15726.5	15405.6	15213.7	14850.8	14721.9	14640.9	14488.0	14661.9
15°	16710.2	16743.2	16641.2	16521.3	16167.4	15870.5	15417.6	15222.7	15144.7	14952.8	15060.8
17.5°	17768.8	17759.8	17675.9	17510.9	17088.1	16653.2	16095.4	15804.5	15750.5	15564.6	15591.6
20°	18995.4	18953.4	18875.4	18647.5	18188.7	17648.9	16920.1	16551.2	16497.3	16341.3	16176.4
22.5°	20326.9	20284.9	20210.0	19919.1	19466.2	18758.5	17885.8	17450.9	17379.0	17184.0	16908.1
25°	21637.5	21592.5	21550.5	21274.6	20833.8	20030.0	18980.4	18425.6	18392.6	18194.7	17687.9
27.5°	22999.0	22972.0	22984.0	22747.1	22306.2	21472.5	20281.9	19679.2	19622.2	19370.3	18680.5
30°	24399.5	24405.5	24519.5	24267.6	23862.7	23023.0	21841.4	21226.6	21235.6	21010.7	20003.0
32.5°	25653.1	25659.1	25914.0	25788.0	25566.1	24729.4	23643.8	23211.9	23298.9	23280.9	22249.3
35°	26558.8	26597.8	27167.6	27338.5	27254.5	26525.8	25872.0	25977.0	26252.9	27032.6	25950.0
37.5°	27410.5	27425.5	28154.2	28550.1	28862.0	28424.1	28292.2	29287.8	29722.7	30802.3	29200.8
40°	27656.4	27863.3	28784.0	29335.8	30061.5	30277.5	30946.2	32418.7	32931.6	33582.3	31390.1
42.5°	27431.5	27725.4	28880.0	30190.5	31198.2	32268.8	33495.4	35162.8	35627.6	36029.5	33486.4
45°	26960.6	27185.5	28385.1	30346.4	32172.8	34296.1	35711.6	37708.9	38128.7	37867.8	35123.8
47.5°	26333.8	26504.8	27842.3	30097.5	32952.5	36113.4	37741.9	39751.2	40057.1	39448.3	36236.4
50°	25464.1	25668.1	27161.6	29755.7	33525.3	37633.9	39373.3	41286.6	41544.6	40431.9	37328.0
52.5°	24390.5	24645.4	26381.8	29173.9	33954.2	38767.5	40512.9	42309.3	42570.2	41847.5	38191.7
55°	23172.9	23526.8	25314.2	28466.1	33984.2	39370.3	41223.7	43808.8	44180.6	43400.9	38947.5
57.5°	21937.4	22165.3	24057.6	27383.5	33420.4	39571.2	42075.4	45554.2	46097.0	44906.4	39772.2
60°	20428.9	20647.8	22522.2	25935.0	32295.8	39880.1	43778.8	48052.3	48484.1	46660.8	40473.9
62.5°	18644.5	18893.4	20593.8	23952.7	30631.4	40006.1	45515.2	50709.4	51204.2	48256.2	40878.8
65°	16377.3	16653.2	18203.7	21553.5	28253.2	39112.4	46264.9	52673.7	52928.6	49479.8	40704.8
67.5°	13900.2	14128.1	15363.7	18569.5	24963.3	36782.2	45872.1	53399.4	53657.3	50310.5	39664.2
69°	12004.8	12355.7	13543.3	16443.3	22597.1	34650.0	45272.3	53996.2	54389.1	50217.5	38296.7
70°	10487.4	10880.2	11953.8	14568.9	20587.8	32436.7	44156.6	53543.4	53654.3	49320.9	37064.1
72.5°	6627.7	6756.7	7245.5	8984.9	14485.0	25215.2	38641.6	47533.5	47503.5	44003.7	32355.8
75°	3274.9	3442.8	4369.5	5044.2	7137.5	16218.4	30415.4	39040.4	39046.4	37139.1	26600.8
77.5°	1967.3	2039.3	2276.2	3250.9	4078.6	7278.5	20644.8	30907.3	31381.1	30226.5	19142.3
80°	1355.5	1319.5	1388.5	1598.4	2195.2	3826.7	8487.0	17471.9	17984.7	16587.2	8154.2
82.5°	1067.6	1037.6	1058.6	1112.6	1046.6	1772.4	3589.8	5224.2	5071.2	4471.4	3133.9
85°	746.7	686.8	725.7	704.8	623.8	1040.6	1745.4	2171.2	2156.3	2228.2	1706.4
87.5°	236.9	209.9	215.9	209.9	173.9	368.9	626.8	845.7	779.7	791.7	599.8
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°	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3	13558.3
2.5°	13669.2	13645.3	13672.2	13813.2	13780.2	13903.2	13933.2	14134.1	14143.1	14125.1	14215.1
5°	13837.2	13861.2	13963.1	14188.1	14263.0	14526.9	14646.9	14892.8	14916.8	14925.8	15012.8
7.5°	14080.1	14122.1	14341.0	14634.9	14775.9	15120.7	15300.7	15603.6	15624.6	15657.6	15756.5
10°	14440.0	14500.0	14673.9	15075.8	15120.7	15393.6	15558.6	15819.5	15801.5	15846.5	15936.5
12.5°	14802.9	14835.8	14967.8	15243.7	15213.7	15480.6	15552.6	15723.5	15711.5	15708.5	15774.5
15°	15192.7	15135.7	15153.7	15258.7	15147.7	15312.7	15261.7	15387.7	15222.7	15156.7	15201.7
17.5°	15606.6	15468.6	15291.7	15213.7	15003.8	14976.8	14802.9	14742.9	14628.9	14592.9	14628.9
20°	16098.4	15804.5	15375.7	15150.7	14691.9	14455.0	14122.1	13927.2	13663.2	13684.2	13735.2
22.5°	16599.2	16185.4	15537.6	14934.8	14287.0	13807.2	13144.4	12967.5	12622.6	12520.6	12622.6
25°	17214.0	16659.2	15618.6	14742.9	13675.2	12820.5	12148.8	11522.0	11261.1	11006.2	11102.1
27.5°	18020.7	17271.0	15912.5	14506.0	12982.5	11842.9	10775.3	9965.5	9641.6	9368.7	9386.7
30°	19067.4	18089.7	16023.4	14008.1	12148.8	10502.3	9158.8	8259.1	7854.3	7743.3	7695.3
32.5°	21001.7	19409.3	16221.4	13645.3	11111.1	9044.9	7395.4	6429.8	6174.9	6222.8	6378.8
35°	24429.5	22171.3	16821.2	12886.5	9965.5	7455.4	5746.0	4999.3	5041.2	5128.2	5110.2
37.5°	27386.5	24663.4	17819.8	12352.7	8565.0	5647.0	4339.5	3943.6	4195.5	4366.5	4360.5
40°	29395.8	26480.8	19127.4	11354.1	6795.6	4024.6	3193.9	2975.0	3295.9	3661.7	3724.7
42.5°	31390.1	28133.2	19760.1	10469.4	4771.3	2840.0	2312.2	2369.2	2780.0	3124.9	3187.9
45°	32823.6	29332.8	20039.0	8891.9	3046.9	2174.2	2018.3	2228.2	2672.1	2945.0	2975.0
47.5°	33876.2	30235.5	19736.1	7194.5	2243.2	1988.3	1991.3	2258.2	2705.1	3014.0	3025.9
50°	34805.9	30871.3	18515.6	5611.0	2018.3	1925.3	2030.3	2345.2	2801.0	3112.9	3103.9
52.5°	35441.7	31057.2	17034.1	4597.4	1955.3	1889.3	2063.3	2426.2	2831.0	3040.9	3022.9
55°	35864.5	30778.3	15894.5	3784.7	1901.3	1886.3	2117.3	2528.1	2861.0	2945.0	2903.0
57.5°	36125.4	30214.5	14931.8	3253.9	1856.4	1886.3	2177.2	2567.1	2972.0	3124.9	3076.9
60°	36047.5	29962.6	13627.3	2819.0	1793.4	1892.3	2210.2	2624.1	3418.8	3778.7	3787.7
62.5°	35891.5	29470.8	12352.7	2474.1	1718.4	1928.3	2252.2	2954.0	4198.5	4201.5	4051.6
65°	35150.8	27989.3	10499.3	2162.2	1640.4	1937.3	2261.2	3496.8	4708.4	4312.5	4117.6
67.5°	33111.5	25821.0	8331.1	1871.3	1553.5	1883.3	2252.2	3421.8	3802.7	3403.8	3304.9
69°	31333.1	23940.7	6960.6	1697.4	1490.5	1829.4	2261.2	3280.9	3520.8	3283.9	3193.9
70°	30037.6	22417.2	5913.9	1592.4	1433.5	1802.4	2261.2	3229.9	3481.8	3256.9	3169.9
72.5°	25782.0	17609.9	3544.8	1328.5	1268.6	1697.4	2240.2	3151.9	3511.8	3319.8	3205.9
75°	19751.1	12808.5	2063.3	1091.6	1067.6	1523.5	2129.3	3103.9	3613.7	3322.8	3073.9
77.5°	12655.6	5910.9	1538.5	887.7	866.7	1319.5	1988.3	2948.0	3712.7	3484.8	3169.9
80°	4396.5	2681.1	1148.6	701.8	671.8	1079.6	1742.4	2657.1	3535.8	3559.8	3322.8
82.5°	2411.2	1766.4	812.7	521.8	494.8	677.8	1355.5	2291.2	3271.9	3523.8	3541.8
85°	1325.5	995.7	533.8	335.9	377.9	581.8	938.7	1781.4	2633.1	3061.9	3196.9
87.5°	536.8	359.9	209.9	132.0	155.9	230.9	317.9	911.7	1589.4	2051.3	2258.2
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)