

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: STREETWORKS

Report Number: P232726

Luminaire Tested: **CST-10-9-D-U-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232726
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: STREETWORKS
Catalog Number: CST-10-9-D-U-T4
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 4000K LEDS AND TYPE IV OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 91390 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B5 - U0 - G5

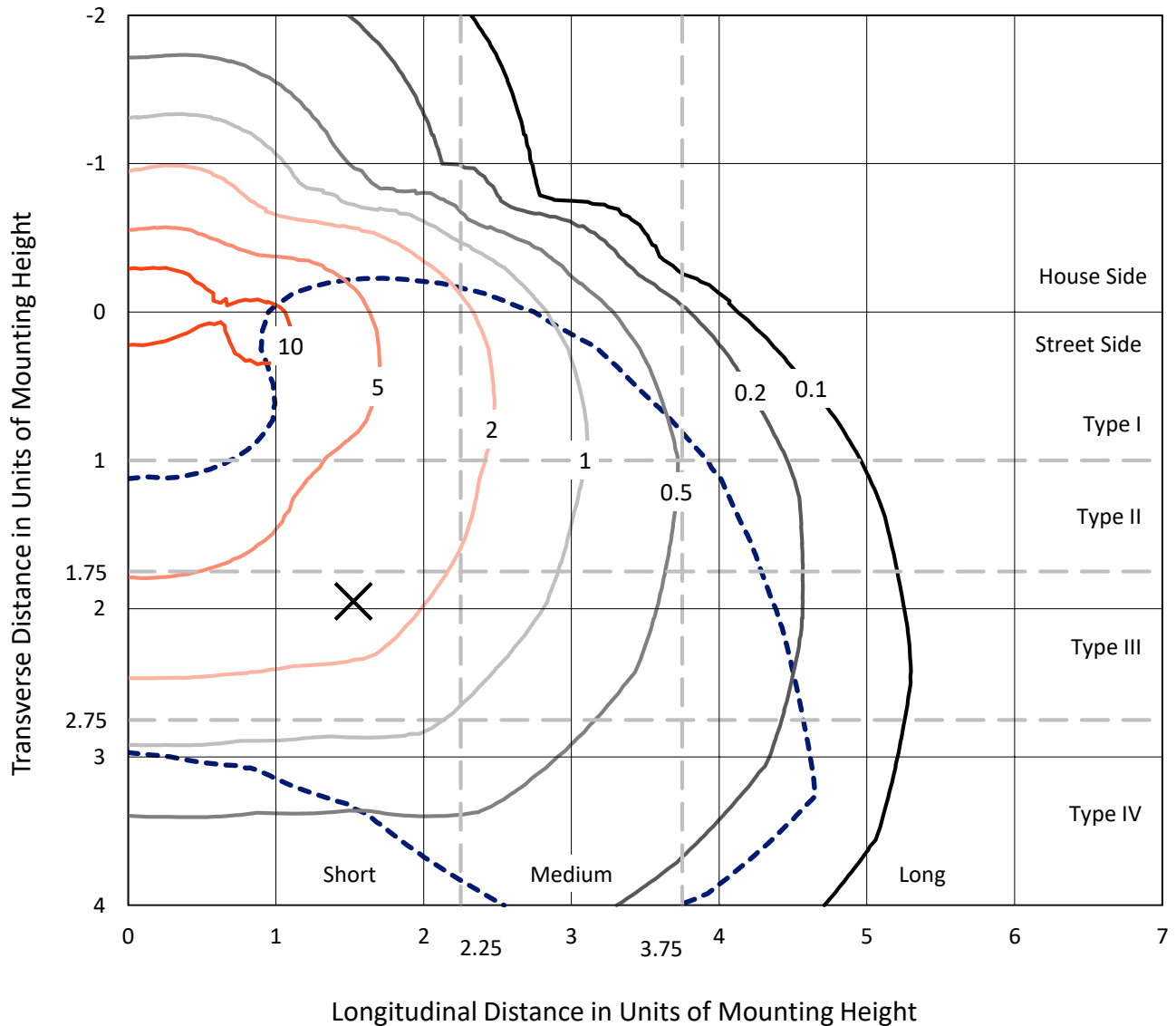
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

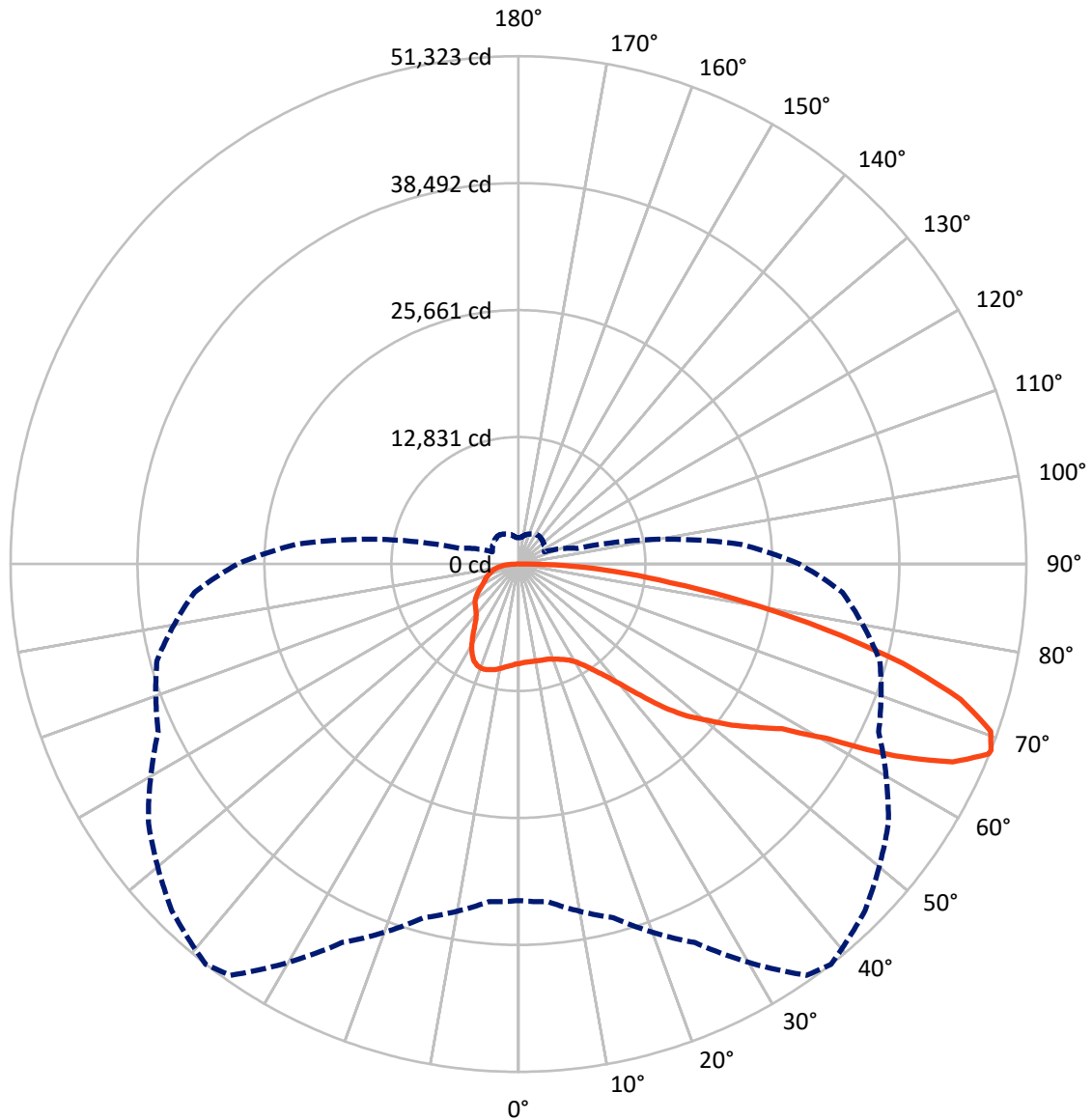
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.5 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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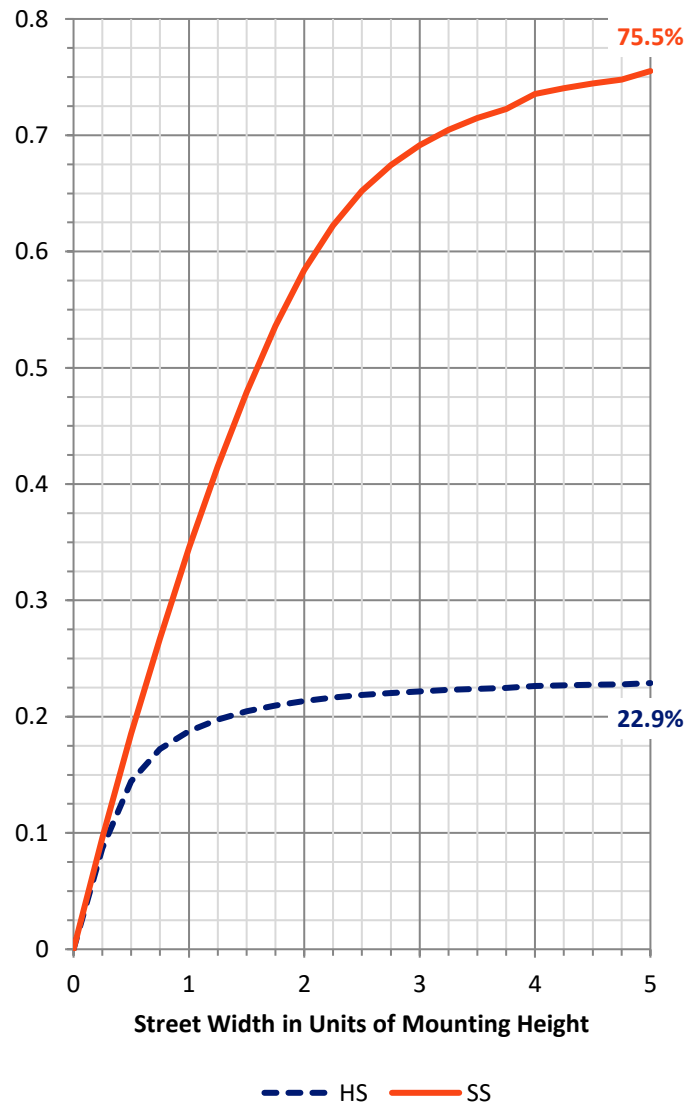
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	21328.4	0.0	21328.4
	% Fixture	23.3	0.0	23.3
Street Side	Lumens	70061.6	0.0	70061.6
	% Fixture	76.7	0.0	76.7
Total	Lumens	91390.0	0.0	91390.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	973.7	1.1
10°-20°	3005.6	3.3
20°-30°	5106.2	5.6
30°-40°	7732.6	8.5
40°-50°	12789.7	14.0
50°-60°	18422.9	20.2
60°-70°	23234.0	25.4
70°-80°	16536.0	18.1
80°-90°	3589.2	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°	91390.0	100.0
0°-180°	91390.0	100.0



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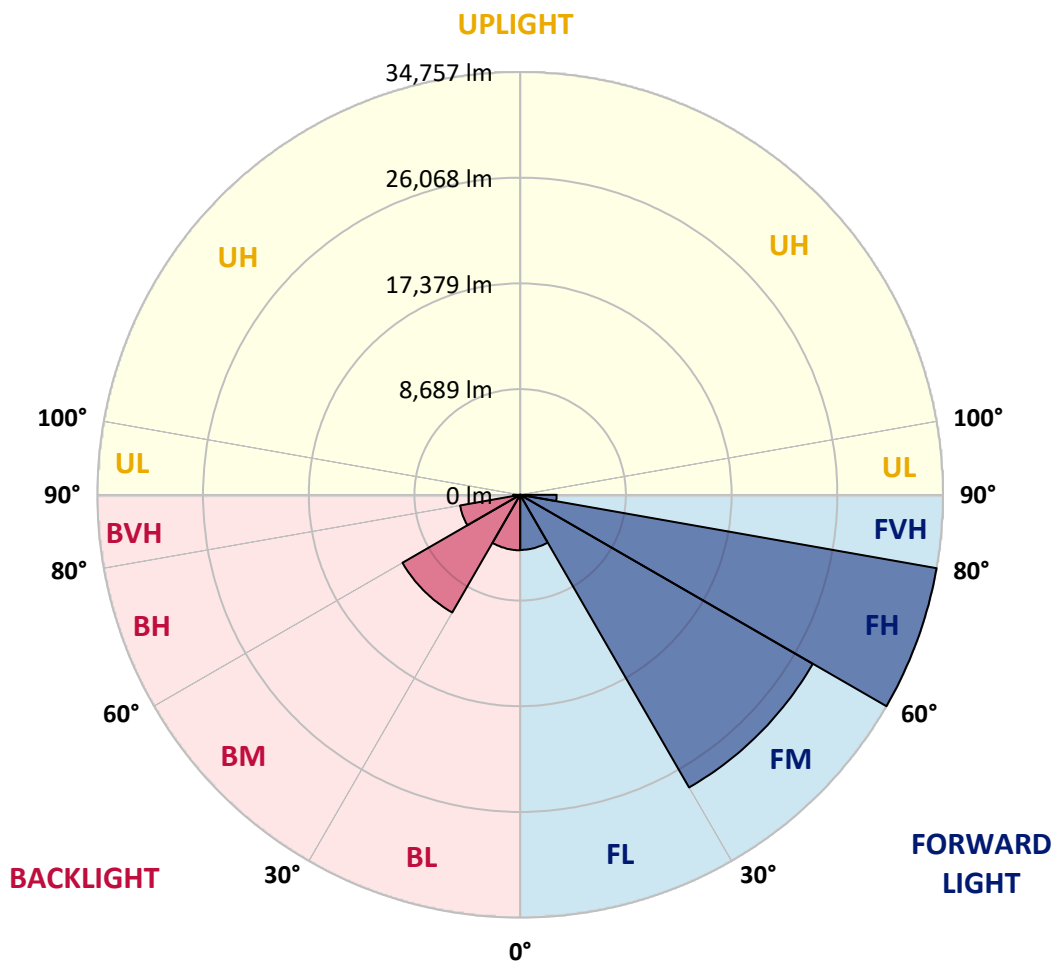
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4527.9	5.0			
FM	(30°-60°)	27776.3	30.4			
FH	(60°-80°)	34757.1	38.0			G5
FVH	(80°-90°)	3000.2	3.3			G5
BL	(0°-30°)	4557.6	5.0	B4/5000		
BM	(30°-60°)	11169.0	12.2	B5		
BH	(60°-80°)	5012.9	5.5	B5		G5
BVH	(80°-90°)	589.0	0.6			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0
2.5°	10032.3	10050.2	10038.3	10032.3	9955.1	9973.0	10002.6	9961.1	10062.0	10056.1	10115.5
5°	9937.3	9946.2	9949.2	9975.9	9901.7	9940.3	9975.9	9949.2	10056.1	10026.4	10109.5
7.5°	9910.6	9907.6	9910.6	9961.1	9880.9	9940.3	9981.9	9973.0	10088.8	10065.0	10165.9
10°	9842.3	9845.3	9854.2	9910.6	9869.0	9949.2	10023.4	10062.0	10216.4	10195.6	10311.4
12.5°	9723.6	9747.3	9780.0	9875.0	9883.9	9990.8	10100.6	10177.8	10379.7	10397.5	10543.0
15°	9619.6	9661.2	9717.6	9845.3	9898.7	10020.5	10160.0	10302.5	10566.8	10646.9	10831.0
17.5°	9652.3	9714.7	9788.9	9919.5	9958.1	10085.8	10243.1	10433.2	10759.8	10932.0	11169.5
20°	9854.2	9895.8	9958.1	10079.8	10130.3	10258.0	10385.7	10572.7	10997.3	11276.4	11570.3
22.5°	10106.6	10165.9	10207.5	10281.7	10341.1	10453.9	10587.5	10771.6	11273.4	11623.7	12027.5
25°	10376.7	10406.4	10465.8	10516.3	10590.5	10679.6	10831.0	11056.7	11588.1	12018.6	12582.7
27.5°	10626.1	10641.0	10753.8	10795.4	10940.9	11006.2	11124.9	11424.8	11997.8	12529.3	13224.0
30°	10991.3	11021.0	11107.1	11205.1	11418.9	11484.2	11605.9	11920.6	12544.1	13224.0	14058.3
32.5°	11683.1	11760.3	11748.4	11852.4	12104.7	12190.8	12357.1	12766.8	13446.7	14227.6	15219.2
35°	13084.5	13194.4	13057.8	12918.2	13051.8	13167.6	13423.0	14022.7	14862.9	16151.5	17131.3
37.5°	15379.6	15489.4	15002.5	14557.1	14266.2	14358.2	14705.6	15554.7	16840.3	19079.0	20171.6
40°	18060.6	18179.3	17502.4	16700.8	16044.6	16009.0	16115.9	17196.6	19052.2	22336.0	23188.1
42.5°	20397.2	20709.0	19824.2	19132.4	18283.3	18140.7	17882.4	18975.0	21391.8	25352.5	25833.5
45°	22668.5	22971.4	22273.6	21795.6	20928.7	20697.1	20207.2	20869.3	23686.9	27992.0	28012.8
47.5°	24752.8	24996.2	24185.7	23879.9	23024.8	22923.9	22422.1	22885.3	25812.7	30227.7	29806.1
50°	27083.5	27338.8	26047.3	25670.2	24981.4	24844.8	24681.5	25014.0	28250.3	32154.6	31329.2
52.5°	29933.7	29838.7	28244.3	27380.4	27015.2	27047.8	26863.7	27231.9	30836.3	33787.5	32528.6
55°	33345.1	32858.2	31106.5	29797.1	28956.9	29117.2	28876.7	29417.1	33392.6	35165.1	33395.6
57.5°	35283.9	35417.5	35251.2	33567.8	31430.1	31406.4	31026.3	31545.9	35625.3	36290.4	33924.1
60°	38110.4	38662.7	38873.5	38419.2	36501.2	35744.1	33841.0	33722.2	37510.7	37261.3	34194.3
62.5°	39897.8	40156.1	41423.9	41973.1	42590.7	42721.3	39698.8	36343.8	38903.1	37757.1	34307.1
65°	39042.7	39304.0	41673.2	43825.8	47489.6	48225.9	47263.9	40497.5	39844.3	37867.0	33930.0
67.5°	34660.4	34981.1	38160.9	42572.9	50452.7	51245.4	49692.6	45286.6	40153.1	37801.6	33110.6
68°	34019.1	34256.6	37000.0	42207.7	50749.6	51322.6	49532.3	45648.8	40170.9	37822.4	32858.2
70°	29090.5	29509.1	32398.0	38885.3	50271.5	50636.7	48531.7	45446.9	39767.1	37484.0	31011.5
72.5°	22674.5	23253.4	25450.5	32297.1	46432.6	46729.5	44965.9	43220.1	38546.9	35135.5	26581.7
75°	16427.6	16923.4	19037.4	24925.0	39090.2	40144.2	39847.3	40162.0	34553.5	29770.4	19251.2
77.5°	11344.6	11769.2	13740.7	18598.0	30310.8	31643.9	33184.8	34001.3	28392.8	22086.6	9150.5
80°	7268.2	7594.8	9272.3	13096.4	21858.0	23110.9	24770.6	25616.8	20195.3	11110.1	1624.1
82.5°	4272.4	4495.1	5641.1	8449.8	14732.3	15495.3	16297.0	14877.8	8105.4	2125.8	1024.3
85°	2122.9	2271.3	2975.0	4780.1	9159.4	9860.1	10127.3	6347.8	1713.1	777.9	697.7
87.5°	950.1	991.7	1276.7	2152.5	4352.6	4587.1	4474.3	1974.4	344.4	291.0	249.4
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°	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0	10068.0
2.5°	10121.4	10097.7	10091.7	10130.3	10088.8	10139.2	10124.4	10237.2	10252.0	10210.5	10278.8
5°	10136.3	10124.4	10133.3	10204.5	10189.7	10293.6	10320.3	10433.2	10433.2	10400.5	10471.8
7.5°	10204.5	10204.5	10231.3	10361.9	10361.9	10451.0	10480.7	10605.4	10602.4	10602.4	10667.7
10°	10376.7	10376.7	10433.2	10599.4	10557.9	10673.6	10688.5	10753.8	10739.0	10741.9	10810.2
12.5°	10632.1	10646.9	10744.9	10890.4	10863.7	10905.2	10875.5	10863.7	10756.8	10756.8	10801.3
15°	10926.0	10988.4	11122.0	11255.6	11166.5	11151.7	10982.4	10834.0	10605.4	10507.4	10557.9
17.5°	11309.0	11415.9	11570.3	11665.3	11496.1	11374.3	11068.5	10682.6	10311.4	10094.7	10100.6
20°	11733.6	11876.1	12066.1	12098.8	11849.4	11546.5	11035.9	10430.2	9791.8	9447.4	9423.7
22.5°	12205.7	12383.8	12603.5	12475.8	12069.1	11576.2	10845.9	10041.2	9183.2	8604.2	8595.3
25°	12781.7	12974.6	13114.2	12757.9	12119.6	11424.8	10516.3	9435.6	8375.6	7752.1	7710.6
27.5°	13515.0	13642.7	13538.8	12903.4	11968.1	11062.6	9958.1	8657.7	7535.4	6971.3	6908.9
30°	14384.9	14370.1	13806.0	12861.8	11662.3	10489.6	9198.0	7814.5	6846.6	6362.6	6306.2
32.5°	15441.9	15228.1	14064.3	12662.9	11169.5	9738.4	8295.5	7113.8	6347.8	5857.9	5798.5
35°	17128.3	16525.6	14399.8	12363.0	10483.6	8832.9	7443.3	6573.4	5961.8	5400.7	5284.9
37.5°	19744.0	18473.3	14958.0	12048.3	9696.8	7945.1	6808.0	6181.5	5659.0	5023.6	4887.0
40°	22434.0	20735.7	15807.1	11709.8	8960.5	7274.1	6448.7	5997.4	5474.9	4863.3	4726.7
42.5°	24770.6	22846.7	16825.5	11285.3	8206.4	6745.6	6264.6	5938.1	5415.5	4833.6	4702.9
45°	26834.1	24743.9	17888.4	10792.4	7416.6	6318.1	6107.3	5854.9	5326.4	4765.3	4646.5
47.5°	28553.1	26255.1	18823.6	10246.1	6641.7	6003.4	5952.9	5659.0	5157.2	4616.8	4515.9
50°	29883.2	27329.9	19450.1	9637.5	5979.6	5756.9	5730.2	5359.1	4872.2	4355.6	4254.6
52.5°	30827.4	28051.4	19815.3	9408.8	5460.0	5471.9	5427.4	5032.5	4560.4	4046.8	3966.6
55°	31427.1	28547.2	19726.2	9114.9	4934.5	5071.1	5077.0	4792.0	4376.3	3877.5	3812.2
57.5°	31655.8	28526.4	19200.7	7642.3	4423.8	4590.1	4670.3	4625.7	4257.6	3770.7	3717.2
60°	31531.1	28190.9	18081.4	5599.6	3895.4	4121.0	4317.0	4308.1	3996.3	3536.1	3479.7
62.5°	31323.2	27413.0	15887.3	4008.2	3497.5	3788.5	4026.0	3945.8	3648.9	3245.1	3206.5
65°	30578.0	26041.3	12282.9	3206.5	3331.2	3601.4	3797.4	3660.8	3369.8	2948.2	2927.5
67.5°	28930.2	23297.9	7170.2	2924.5	3209.5	3444.1	3583.6	3414.4	3144.2	2734.5	2698.8
68°	28372.0	22594.3	6098.4	2897.8	3185.8	3405.5	3533.1	3355.0	3090.8	2692.9	2657.3
70°	25554.4	18313.0	2909.6	2787.9	3081.8	3227.3	3301.6	3138.3	2880.0	2526.6	2502.9
72.5°	19889.5	11047.7	1944.7	2621.6	2880.0	3019.5	3037.3	2782.0	2538.5	2277.2	2262.4
75°	11751.4	3666.7	1808.1	2375.2	2600.9	2793.9	2844.3	2589.0	2318.8	2016.0	2010.0
77.5°	2862.1	1422.2	1707.2	2119.9	2357.4	2544.5	2583.1	2396.0	2158.5	1817.0	1805.2
80°	1178.7	1181.7	1591.4	1757.7	2021.9	2203.0	2259.4	2093.2	1879.4	1659.7	1635.9
82.5°	979.8	997.6	1350.9	1297.5	1618.1	1828.9	1885.3	1769.5	1695.3	1457.8	1434.0
85°	697.7	884.8	896.6	872.9	1134.2	1303.4	1588.4	1532.0	1451.9	1250.0	1131.2
87.5°	326.6	516.6	388.9	374.1	576.0	771.9	908.5	953.1	825.4	641.3	593.8
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)