

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: P232723

Luminaire Tested: **CST-10-4-D-U-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232723
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-10-4-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: 42457 lumens
Efficiency: N/A
Efficacy: 137.8 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B4 - U0 - G5

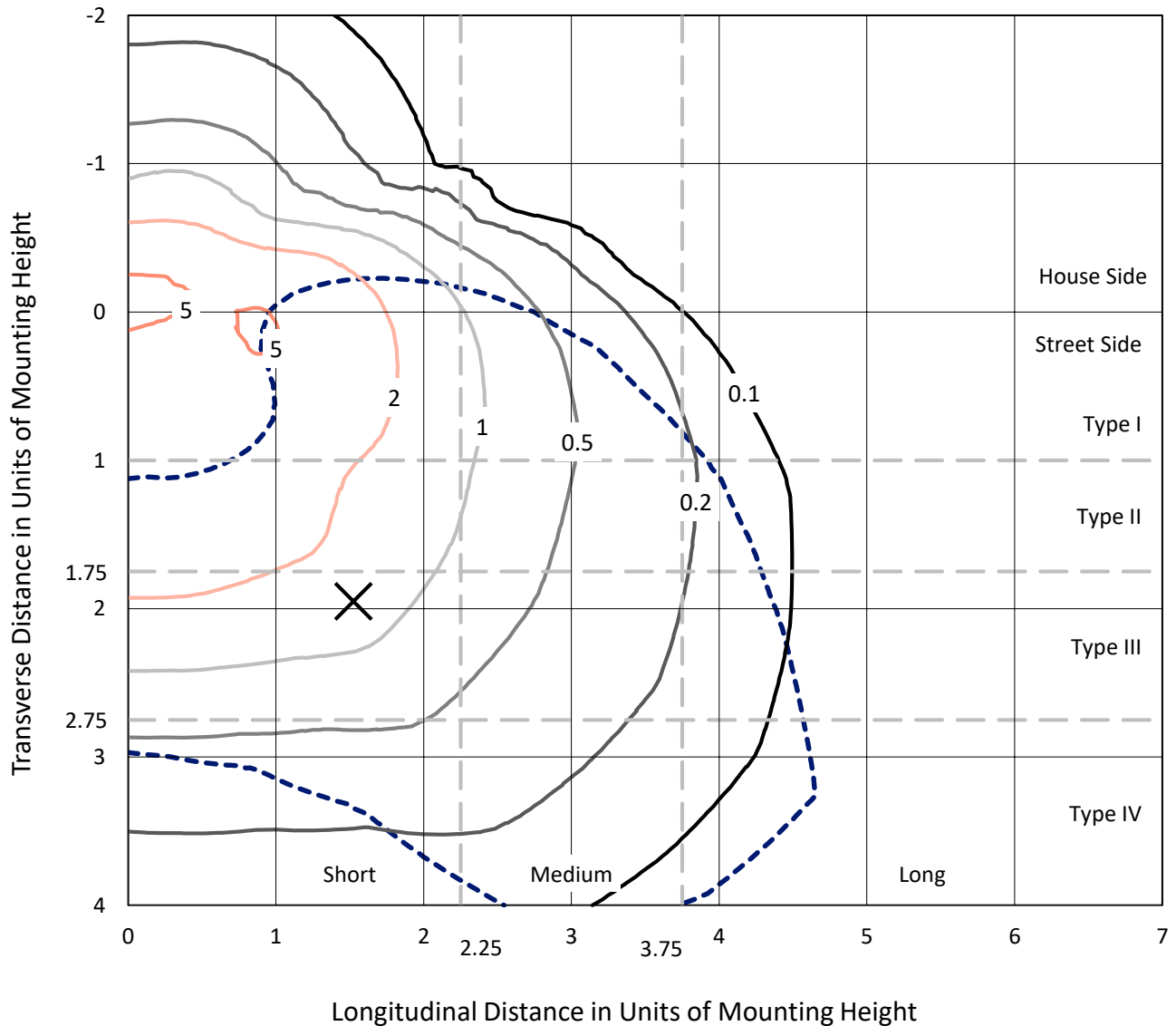
Input Watts (W): 308
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

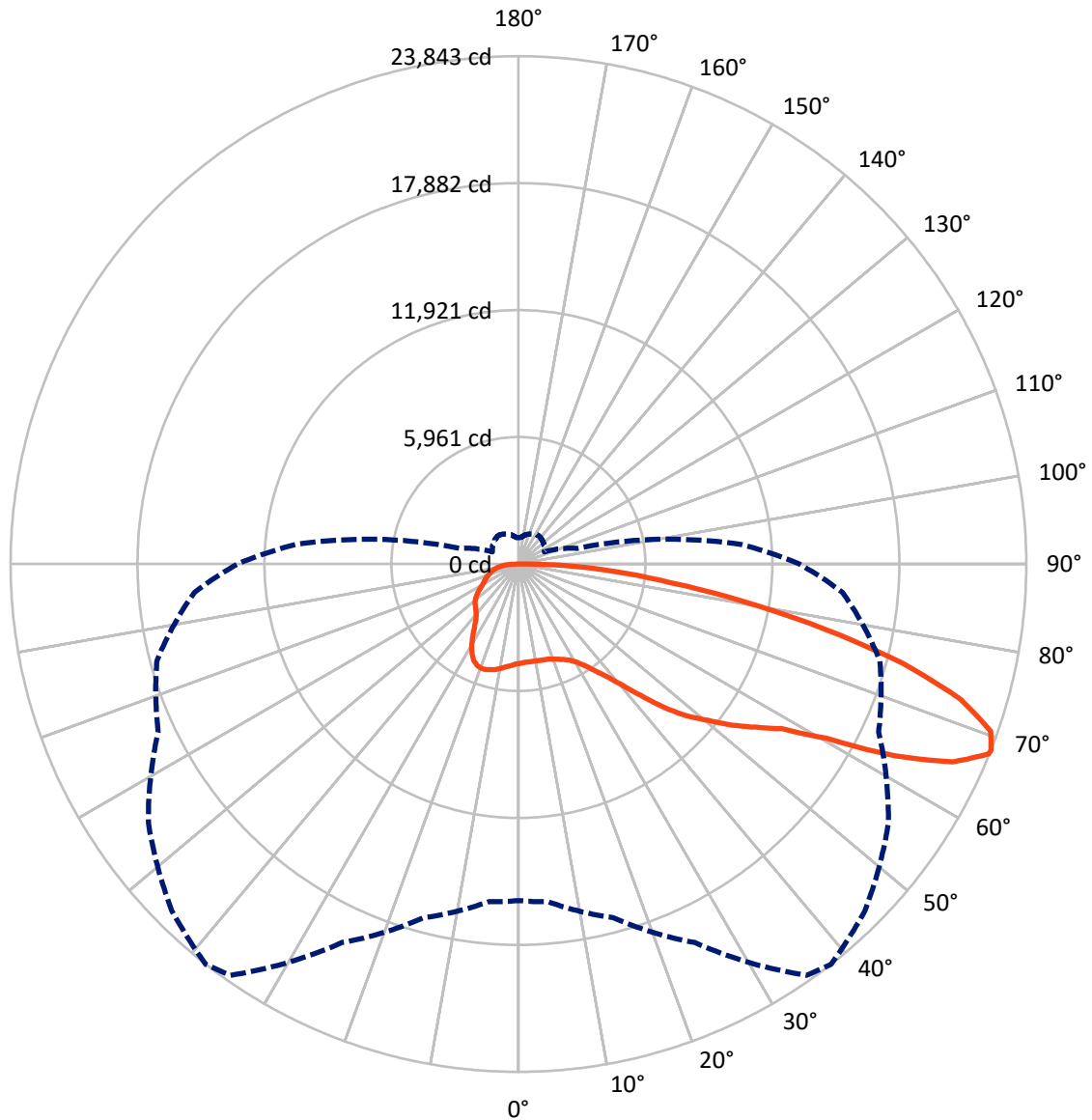
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.4 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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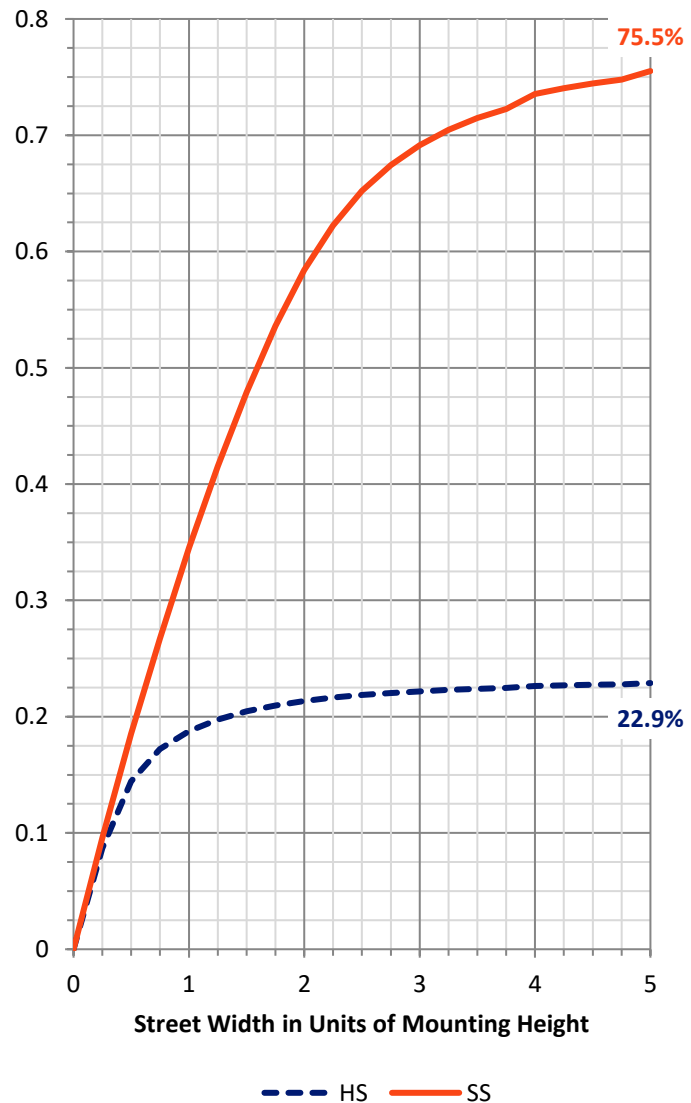
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9908.5	0.0	9908.5
	% Fixture	23.3	0.0	23.3
Street Side	Lumens	32548.5	0.0	32548.5
	% Fixture	76.7	0.0	76.7
Total	Lumens	42457.0	0.0	42457.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	452.3	1.1
10°-20°	1396.3	3.3
20°-30°	2372.2	5.6
30°-40°	3592.4	8.5
40°-50°	5941.7	14.0
50°-60°	8558.7	20.2
60°-70°	10793.8	25.4
70°-80°	7682.1	18.1
80°-90°	1667.5	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°	42457.0	100.0
0°-180°	42457.0	100.0



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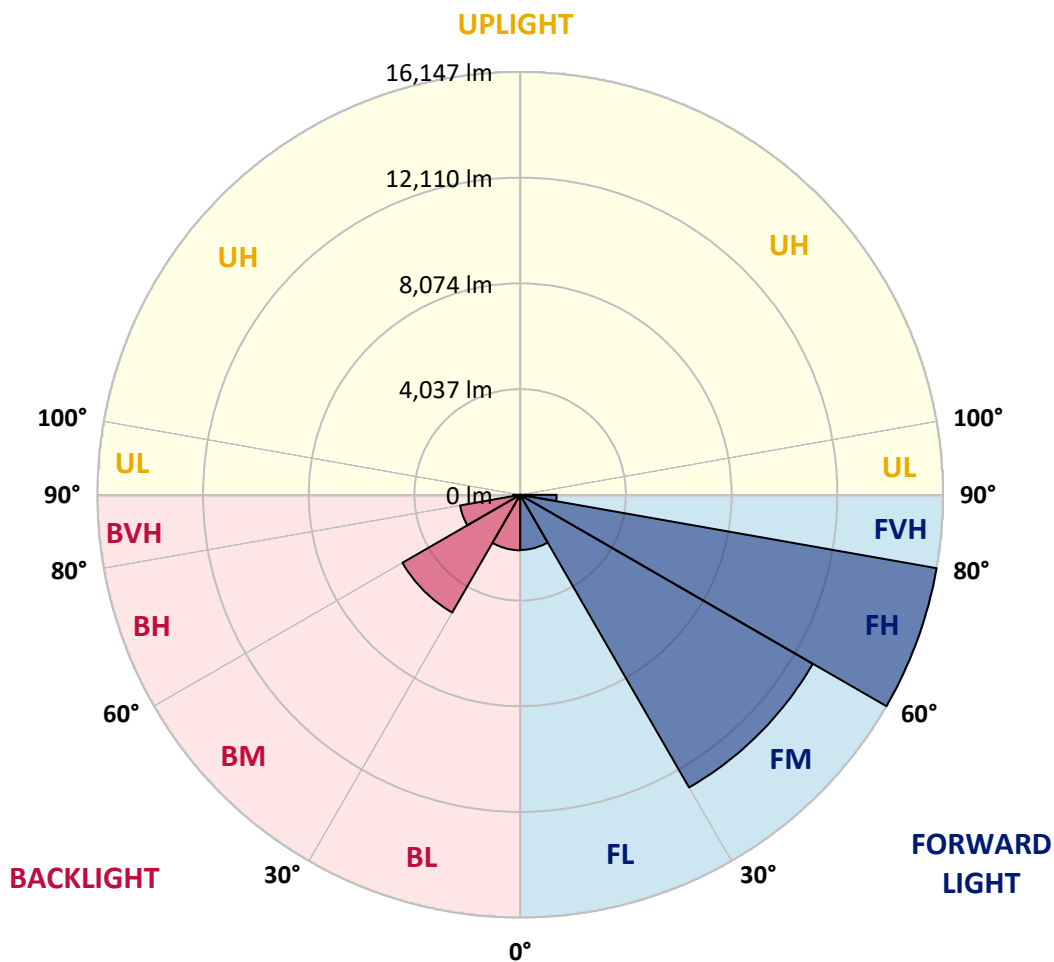
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2103.5	5.0			
FM	(30°-60°)	12904.0	30.4			
FH	(60°-80°)	16147.1	38.0			G5
FVH	(80°-90°)	1393.8	3.3			G5
BL	(0°-30°)	2117.3	5.0	B3/2500		
BM	(30°-60°)	5188.8	12.2	B4/8500		
BH	(60°-80°)	2328.8	5.5	B3/2500		G3/2500
BVH	(80°-90°)	273.6	0.6			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3
2.5°	4660.7	4669.0	4663.5	4660.7	4624.9	4633.1	4646.9	4627.6	4674.5	4671.8	4699.3
5°	4616.6	4620.7	4622.1	4634.5	4600.0	4618.0	4634.5	4622.1	4671.8	4658.0	4696.6
7.5°	4604.2	4602.8	4604.2	4627.6	4590.4	4618.0	4637.3	4633.1	4686.9	4675.9	4722.8
10°	4572.4	4573.8	4578.0	4604.2	4584.9	4622.1	4656.6	4674.5	4746.2	4736.6	4790.4
12.5°	4517.3	4528.3	4543.5	4587.6	4591.8	4641.4	4692.4	4728.3	4822.1	4830.4	4898.0
15°	4469.0	4488.3	4514.5	4573.8	4598.6	4655.2	4720.0	4786.2	4909.0	4946.2	5031.8
17.5°	4484.2	4513.1	4547.6	4608.3	4626.2	4685.5	4758.6	4846.9	4998.7	5078.7	5189.0
20°	4578.0	4597.3	4626.2	4682.8	4706.2	4765.5	4824.9	4911.8	5109.0	5238.7	5375.2
22.5°	4695.2	4722.8	4742.1	4776.6	4804.2	4856.6	4918.7	5004.2	5237.3	5400.0	5587.6
25°	4820.7	4834.5	4862.1	4885.5	4920.0	4961.4	5031.8	5136.6	5383.5	5583.5	5845.6
27.5°	4936.6	4943.5	4995.9	5015.2	5082.8	5113.1	5168.3	5307.6	5573.8	5820.7	6143.5
30°	5106.2	5120.0	5160.0	5205.5	5304.9	5335.2	5391.8	5538.0	5827.6	6143.5	6531.1
32.5°	5427.6	5463.5	5458.0	5506.2	5623.5	5663.5	5740.7	5931.1	6246.9	6609.7	7070.4
35°	6078.7	6129.7	6066.2	6001.4	6063.5	6117.3	6235.9	6514.5	6904.9	7503.5	7958.7
37.5°	7144.9	7195.9	6969.7	6762.8	6627.6	6670.4	6831.8	7226.3	7823.5	8863.5	9371.1
40°	8390.4	8445.6	8131.1	7758.7	7453.8	7437.3	7486.9	7989.0	8851.1	10376.6	10772.5
42.5°	9475.9	9620.7	9209.7	8888.3	8493.8	8427.6	8307.6	8815.2	9938.0	11778.0	12001.5
45°	10531.1	10671.8	10347.6	10125.6	9722.8	9615.2	9387.6	9695.2	11004.2	13004.2	13013.9
47.5°	11499.4	11612.5	11235.9	11093.9	10696.6	10649.7	10416.6	10631.8	11991.8	14042.8	13847.0
50°	12582.1	12700.8	12100.8	11925.6	11605.6	11542.1	11466.3	11620.8	13124.2	14938.0	14554.6
52.5°	13906.3	13862.2	13121.5	12720.1	12550.4	12565.6	12480.1	12651.1	14325.6	15696.6	15111.8
55°	15491.1	15264.9	14451.1	13842.8	13452.5	13527.0	13415.3	13666.3	15513.2	16336.7	15514.6
57.5°	16391.8	16453.9	16376.7	15594.6	14601.5	14590.4	14413.9	14655.3	16550.4	16859.4	15760.1
60°	17704.9	17961.5	18059.4	17848.4	16957.3	16605.6	15721.5	15666.3	17426.3	17310.5	15885.6
62.5°	18535.3	18655.3	19244.3	19499.4	19786.3	19847.0	18442.9	16884.2	18073.2	17540.8	15938.0
65°	18138.0	18259.4	19360.1	20360.1	22062.2	22404.3	21957.4	18813.9	18510.5	17591.8	15762.9
67.5°	16102.2	16251.1	17728.4	19778.1	23438.8	23807.0	23085.7	21038.7	18653.9	17561.5	15382.2
68°	15804.2	15914.6	17189.1	19608.4	23576.7	23842.9	23011.2	21207.0	18662.2	17571.1	15264.9
70°	13514.6	13709.0	15051.1	18064.9	23354.6	23524.3	22546.3	21113.2	18474.6	17413.9	14407.0
72.5°	10533.9	10802.8	11823.5	15004.2	21571.2	21709.1	20889.8	20078.7	17907.7	16322.9	12349.0
75°	7631.8	7862.1	8844.2	11579.4	18160.1	18649.8	18511.8	18658.0	16052.5	13830.4	8943.5
77.5°	5270.4	5467.6	6383.5	8640.1	14081.5	14700.8	15416.6	15796.0	13190.4	10260.8	4251.1
80°	3376.6	3528.3	4307.6	6084.2	10154.5	10736.6	11507.7	11900.8	9382.1	5161.4	754.5
82.5°	1984.8	2088.3	2620.7	3925.5	6844.2	7198.7	7571.1	6911.8	3765.5	987.6	475.9
85°	986.2	1055.2	1382.1	2220.7	4255.2	4580.7	4704.9	2949.0	795.9	361.4	324.1
87.5°	441.4	460.7	593.1	1000.0	2022.1	2131.0	2078.6	917.2	160.0	135.2	115.9
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°	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3	4677.3
2.5°	4702.1	4691.1	4688.3	4706.2	4686.9	4710.4	4703.5	4755.9	4762.8	4743.5	4775.2
5°	4709.0	4703.5	4707.6	4740.7	4733.8	4782.1	4794.5	4846.9	4846.9	4831.8	4864.9
7.5°	4740.7	4740.7	4753.1	4813.8	4813.8	4855.2	4869.0	4926.9	4925.5	4925.5	4955.9
10°	4820.7	4820.7	4846.9	4924.2	4904.9	4958.7	4965.5	4995.9	4989.0	4990.4	5022.1
12.5°	4939.3	4946.2	4991.8	5059.3	5046.9	5066.2	5052.4	5046.9	4997.3	4997.3	5018.0
15°	5075.9	5104.9	5166.9	5229.0	5187.6	5180.7	5102.1	5033.1	4926.9	4881.4	4904.9
17.5°	5253.8	5303.5	5375.2	5419.3	5340.7	5284.2	5142.1	4962.8	4790.4	4689.7	4692.4
20°	5451.1	5517.3	5605.6	5620.7	5504.9	5364.2	5126.9	4845.5	4549.0	4389.0	4378.0
22.5°	5670.4	5753.1	5855.2	5795.9	5606.9	5378.0	5038.7	4664.9	4266.2	3997.3	3993.1
25°	5938.0	6027.6	6092.5	5926.9	5630.4	5307.6	4885.5	4383.5	3891.1	3601.4	3582.1
27.5°	6278.7	6338.0	6289.7	5994.5	5560.0	5139.3	4626.2	4022.1	3500.7	3238.6	3209.7
30°	6682.8	6675.9	6413.8	5975.2	5418.0	4873.1	4273.1	3630.4	3180.7	2955.9	2929.7
32.5°	7173.8	7074.5	6533.8	5882.8	5189.0	4524.2	3853.8	3304.8	2949.0	2721.4	2693.8
35°	7957.3	7677.3	6689.7	5743.5	4870.4	4103.5	3458.0	3053.8	2769.7	2509.0	2455.2
37.5°	9172.5	8582.1	6949.0	5597.3	4504.9	3691.1	3162.8	2871.7	2629.0	2333.8	2270.4
40°	10422.1	9633.2	7343.5	5440.0	4162.8	3379.3	2995.9	2786.2	2543.5	2259.3	2195.9
42.5°	11507.7	10613.9	7816.6	5242.8	3812.4	3133.8	2910.4	2758.6	2515.9	2245.5	2184.8
45°	12466.3	11495.2	8310.4	5013.8	3445.5	2935.2	2837.3	2720.0	2474.5	2213.8	2158.6
47.5°	13264.9	12197.3	8744.9	4760.0	3085.5	2789.0	2765.5	2629.0	2395.9	2144.8	2097.9
50°	13882.8	12696.6	9035.9	4477.3	2777.9	2674.5	2662.1	2489.7	2263.5	2023.5	1976.6
52.5°	14321.5	13031.8	9205.6	4371.1	2536.6	2542.1	2521.4	2337.9	2118.6	1880.0	1842.8
55°	14600.1	13262.1	9164.2	4234.5	2292.4	2355.9	2358.6	2226.2	2033.1	1801.4	1771.0
57.5°	14706.3	13252.5	8920.1	3550.4	2055.2	2132.4	2169.7	2149.0	1977.9	1751.7	1726.9
60°	14648.4	13096.6	8400.1	2601.4	1809.7	1914.5	2005.5	2001.4	1856.6	1642.8	1616.6
62.5°	14551.8	12735.2	7380.7	1862.1	1624.8	1760.0	1870.4	1833.1	1695.2	1507.6	1489.7
65°	14205.6	12098.0	5706.2	1489.7	1547.6	1673.1	1764.1	1700.7	1565.5	1369.7	1360.0
67.5°	13440.1	10823.5	3331.1	1358.6	1491.0	1600.0	1664.8	1586.2	1460.7	1270.4	1253.8
68°	13180.8	10496.6	2833.1	1346.2	1480.0	1582.1	1641.4	1558.6	1435.9	1251.0	1234.5
70°	11871.8	8507.6	1351.7	1295.2	1431.7	1499.3	1533.8	1457.9	1337.9	1173.8	1162.8
72.5°	9240.1	5132.4	903.5	1217.9	1337.9	1402.8	1411.0	1292.4	1179.3	1057.9	1051.0
75°	5459.3	1703.5	840.0	1103.5	1208.3	1297.9	1321.4	1202.8	1077.2	936.6	933.8
77.5°	1329.7	660.7	793.1	984.8	1095.2	1182.1	1200.0	1113.1	1002.8	844.1	838.6
80°	547.6	549.0	739.3	816.6	939.3	1023.5	1049.7	972.4	873.1	771.0	760.0
82.5°	455.2	463.5	627.6	602.8	751.7	849.7	875.9	822.1	787.6	677.2	666.2
85°	324.1	411.0	416.6	405.5	526.9	605.5	737.9	711.7	674.5	580.7	525.5
87.5°	151.7	240.0	180.7	173.8	267.6	358.6	422.1	442.8	383.5	297.9	275.9
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)