

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: P591354

Luminaire Tested: **CTN-CA8-230-730-U-T3-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591354  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-230-730-U-T3-SSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (8) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18176 lumens  
Efficiency: N/A  
Efficacy: 79.6 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

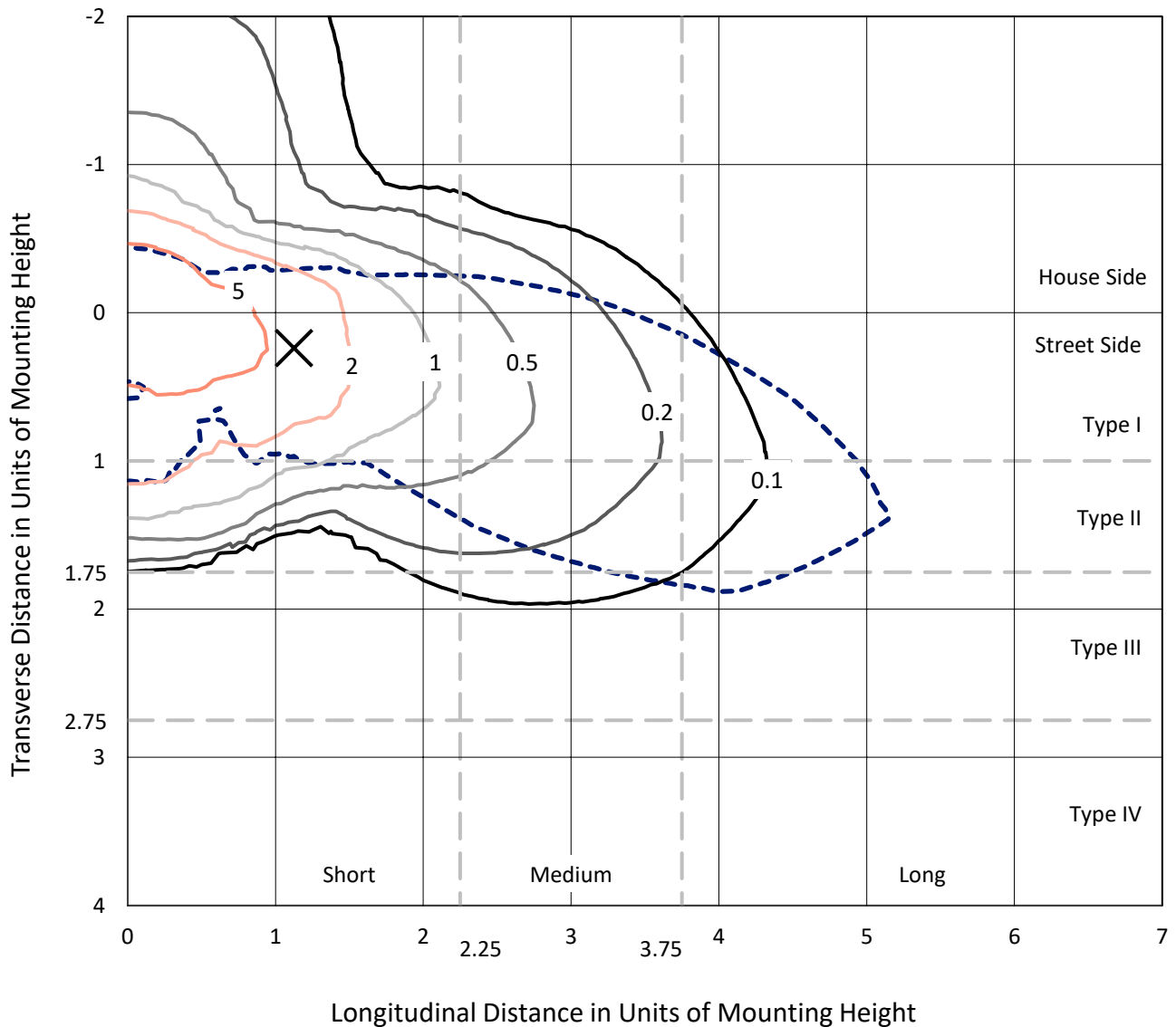
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

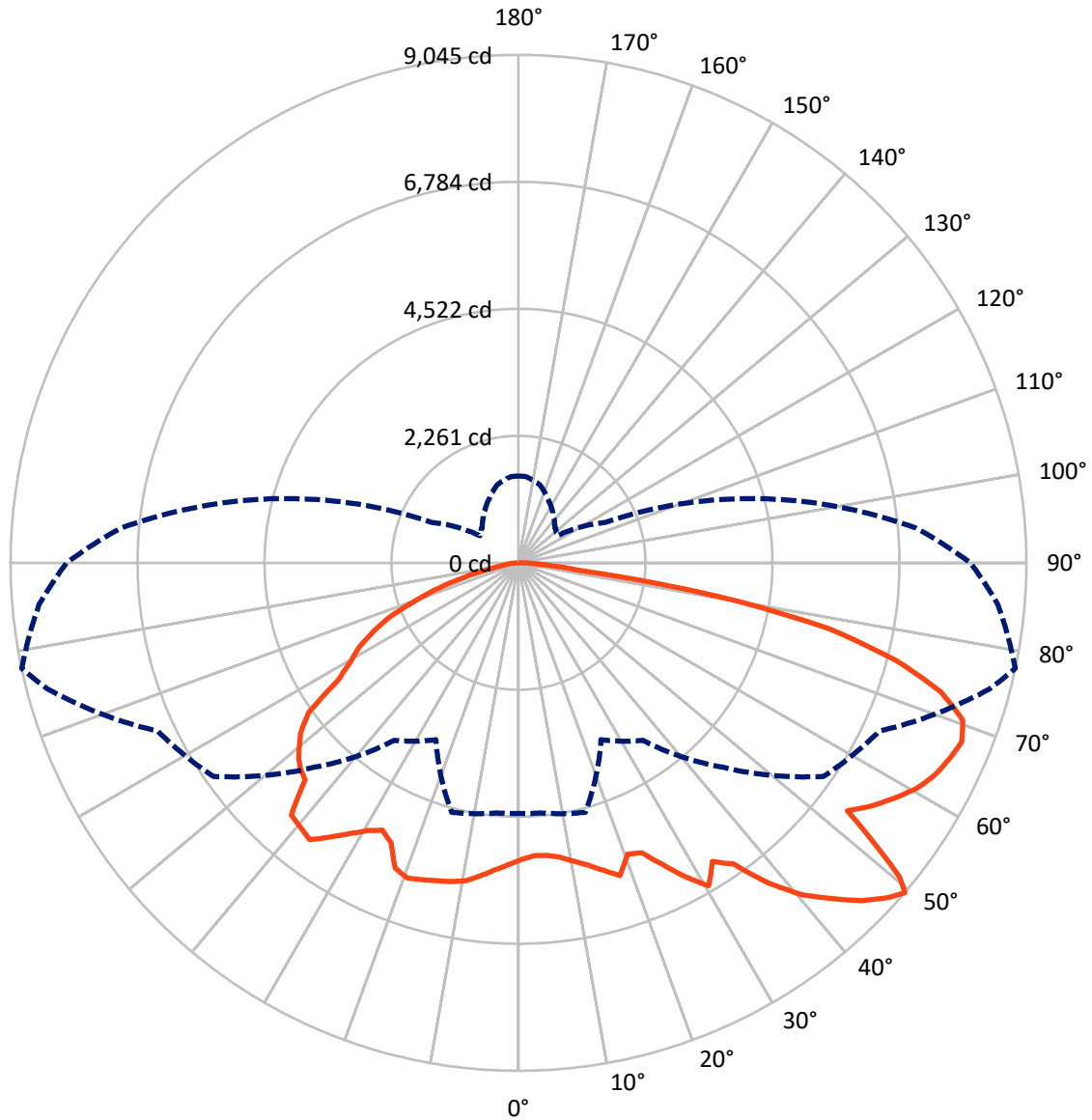
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral      - - - Horizontal Cone Through 49-Deg Vertical

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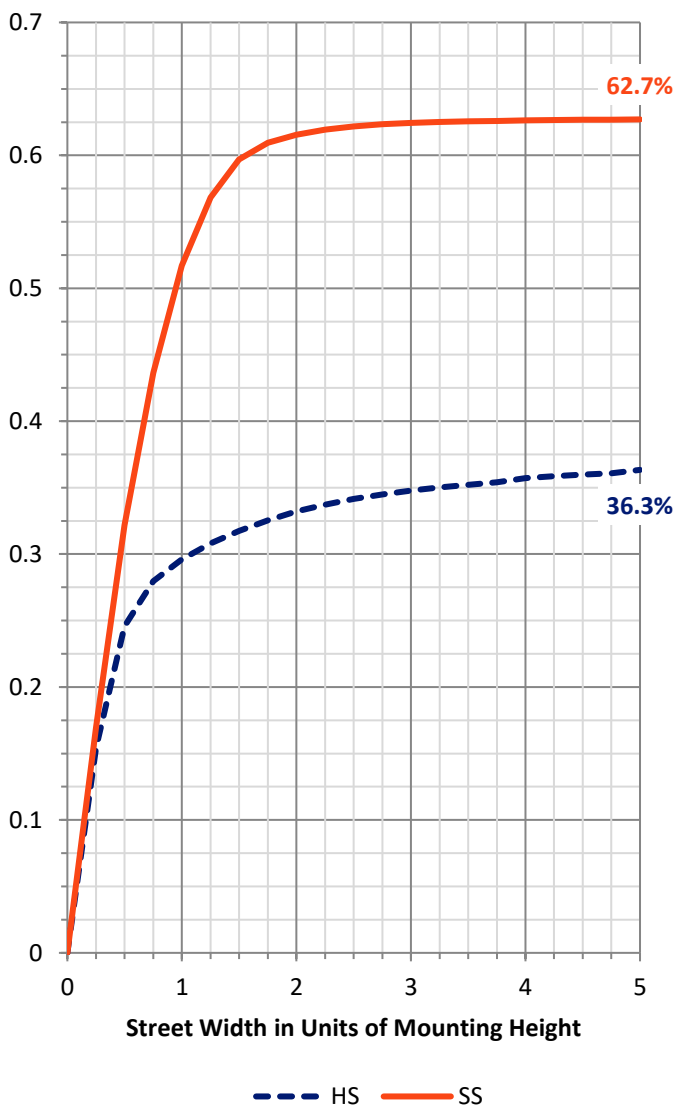
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6798.2	0.0	6798.2
	% Fixture	37.4	0.0	37.4
<b>Street Side</b>	Lumens	11377.8	0.0	11377.8
	% Fixture	62.6	0.0	62.6
<b>Total</b>	Lumens	18176.0	0.0	18176.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	529.1	2.9
10°-20°	1624.0	8.9
20°-30°	2353.4	12.9
30°-40°	2891.8	15.9
40°-50°	3263.8	18.0
50°-60°	3101.5	17.1
60°-70°	2316.3	12.7
70°-80°	1720.3	9.5
80°-90°	375.9	2.1
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°	18176.0	100.0
0°-180°	18176.0	100.0

**Coefficient of Utilization**



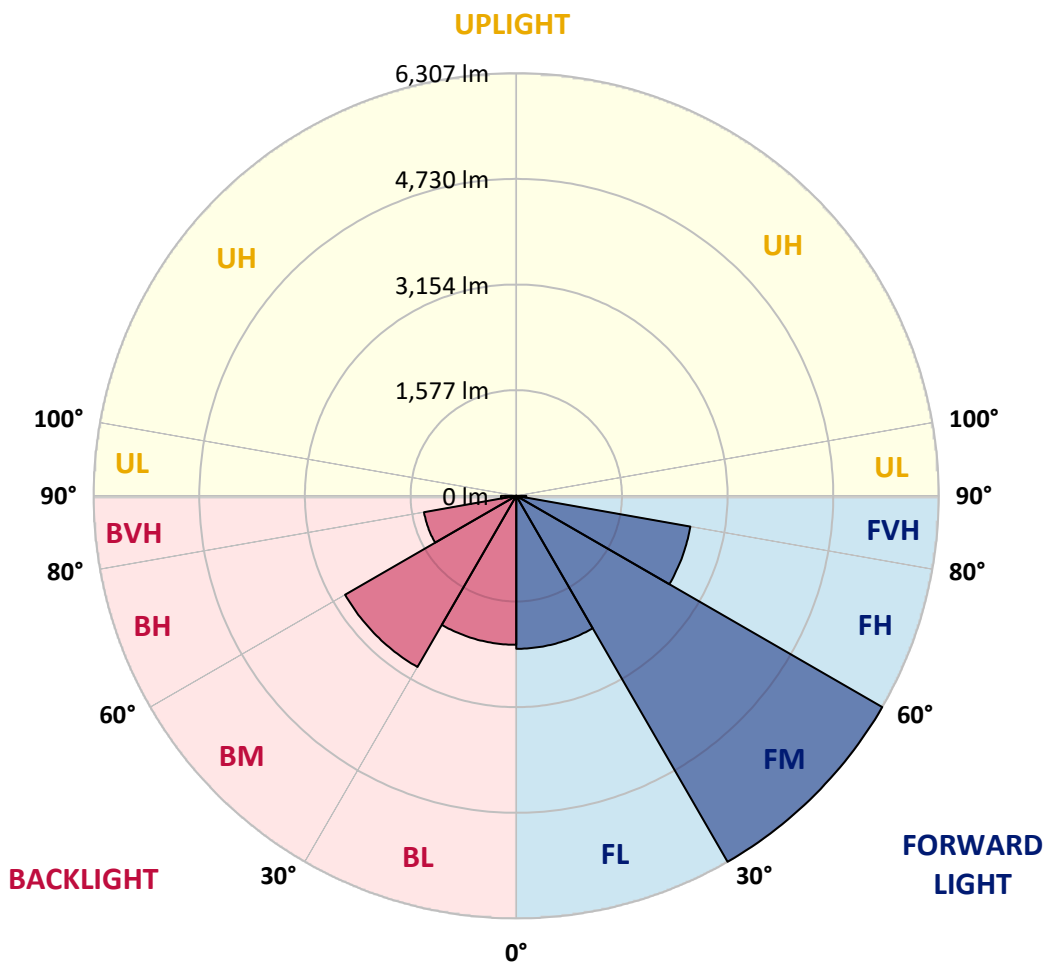
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2283.0	12.6			
FM (30°-60°)	6307.1	34.7			
FH (60°-80°)	2639.0	14.5			G2/5000
FVH (80°-90°)	148.6	0.8			G2/225
BL (0°-30°)	2223.4	12.2	B3/2500		
BM (30°-60°)	2949.9	16.2	B3/5000		
BH (60°-80°)	1397.6	7.7	B3/2500		G3/2500
BVH (80°-90°)	227.3	1.3			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5
2.5°	5171.3	5143.0	5150.6	5194.1	5110.4	5171.3	5146.2	5205.0	5224.6	5222.4	5307.2
5°	5213.7	5176.7	5187.6	5217.0	5125.6	5172.4	5152.8	5215.9	5232.2	5233.3	5348.6
7.5°	5369.2	5326.8	5315.9	5318.1	5232.2	5267.0	5217.0	5265.9	5295.3	5292.0	5420.4
10°	5595.5	5548.7	5524.8	5517.2	5412.8	5397.5	5336.6	5354.0	5397.5	5403.0	5533.5
12.5°	5828.3	5791.3	5756.5	5739.1	5595.5	5561.8	5472.6	5487.8	5520.4	5527.0	5662.9
15°	6033.9	5999.1	5993.6	5974.0	5828.3	5763.0	5655.3	5639.0	5664.0	5684.7	5803.3
17.5°	5832.6	5788.0	5759.8	5766.3	5692.3	5527.0	5460.6	5572.7	5781.5	5854.4	5966.4
20°	5264.8	5319.2	5296.4	5208.3	5128.8	5396.4	5339.9	5315.9	5445.4	5538.9	5809.8
22.5°	4625.2	4625.2	4842.8	4995.0	5025.5	5175.6	5484.5	5592.2	5606.4	5606.4	5528.1
25°	4119.4	4263.0	4631.7	5210.4	5213.7	5183.2	5269.2	5859.8	5957.7	5946.8	5815.2
27.5°	4315.2	4291.3	4539.3	4941.7	5510.7	5475.8	5308.3	5574.8	6382.0	6331.9	6163.3
30°	4488.1	4464.2	4508.8	5008.1	5595.5	5793.5	5649.9	5570.5	6404.8	6676.7	6575.6
32.5°	4650.2	4623.0	4674.2	4750.3	5324.6	6108.9	6007.8	5955.6	6078.5	6342.8	7042.2
35°	4780.8	4785.1	4843.8	4955.9	5219.1	6002.3	6366.7	6386.3	6601.7	6585.4	6938.9
37.5°	4877.6	4886.3	4937.4	5070.1	5168.0	4958.1	6708.3	6934.5	7266.3	7233.7	6973.7
40°	4883.0	4902.6	5004.8	5168.0	5283.3	4415.3	6645.2	7539.3	7867.9	7772.1	7449.1
42.5°	4781.8	4791.6	4962.4	5238.7	4009.5	4592.6	6162.2	8142.0	8288.8	8171.3	7812.4
45°	4691.6	4689.4	4872.1	5120.1	3788.7	4800.3	6149.2	7966.8	8676.1	8584.7	8126.7
47.5°	4564.3	4563.2	4741.6	3852.9	3836.6	5024.4	6473.3	6908.4	8997.0	8899.1	8412.8
49°	4462.0	4472.9	4599.1	3475.4	3858.3	5149.5	6631.1	7089.0	8682.6	9044.8	8571.6
50°	4406.6	4417.4	4109.6	3437.4	3864.9	5221.3	6713.7	7221.7	7814.6	8797.9	8673.9
52.5°	4154.2	4058.5	3186.1	3358.0	3867.0	5306.2	5772.8	7503.5	7448.0	7333.8	8212.7
55°	2503.0	2832.6	2884.8	3267.7	3832.2	3854.0	5639.0	7830.9	7806.9	7640.5	7071.6
57.5°	1517.4	1502.2	2227.8	3016.4	2566.1	3231.8	5859.8	8263.8	8122.4	7900.5	7192.3
60°	535.2	473.2	477.5	514.5	955.1	2418.1	4674.2	6223.1	8187.7	8152.9	7302.2
62.5°	42.4	40.2	40.2	42.4	60.9	908.3	3706.0	6242.7	8413.9	8323.6	7327.2
65°	5.4	5.4	5.4	12.0	31.5	821.3	3711.5	6343.9	8582.5	8428.1	7260.9
67.5°	0.0	0.0	3.3	8.7	25.0	726.6	3602.7	6403.7	8733.7	8515.1	7200.0
70°	0.0	0.0	2.2	7.6	21.8	601.5	3470.0	6455.9	8663.0	8392.2	6893.2
72.5°	0.0	0.0	2.2	6.5	18.5	397.0	3076.2	6069.8	8159.4	7865.7	6263.4
75°	0.0	0.0	2.2	5.4	17.4	226.3	2520.4	5362.7	7260.9	6949.8	5277.9
77.5°	0.0	0.0	1.1	4.4	15.2	124.0	1741.5	4439.2	5998.0	5656.4	3954.1
80°	0.0	0.0	1.1	4.4	14.1	84.8	791.9	2883.7	3997.6	3570.1	2166.8
82.5°	0.0	0.0	1.1	4.4	10.9	57.7	319.8	808.2	1236.8	1057.3	689.6
85°	0.0	0.0	1.1	3.3	7.6	37.0	157.7	331.8	499.3	479.7	349.2
87.5°	0.0	0.0	1.1	3.3	5.4	10.9	46.8	108.8	194.7	198.0	149.0
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°	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5	5285.5
2.5°	5347.5	5357.3	5389.9	5438.9	5446.5	5512.8	5502.0	5626.0	5637.9	5667.3	5699.9
5°	5404.1	5437.8	5511.7	5623.8	5705.4	5805.4	5795.6	5936.0	5950.1	5942.5	5992.5
7.5°	5486.7	5536.8	5652.1	5803.3	5830.5	5954.5	5938.1	6060.0	6062.2	6045.8	6094.8
10°	5607.5	5666.2	5772.8	5858.7	5924.0	5999.1	5988.2	6097.0	6086.1	6067.6	6118.7
12.5°	5723.9	5756.5	5821.8	5922.9	5934.9	5965.3	5946.8	6048.0	6037.1	6011.0	6058.9
15°	5828.3	5844.6	5845.7	5895.7	5868.5	5891.4	5842.4	5915.3	5890.3	5880.5	5914.2
17.5°	5962.1	5931.6	5887.0	5883.8	5791.3	5759.8	5681.4	5701.0	5648.8	5644.4	5662.9
20°	5979.5	6042.6	5914.2	5781.5	5626.0	5546.5	5398.6	5399.7	5341.0	5318.1	5329.0
22.5°	5503.0	5658.6	5945.8	5692.3	5428.0	5249.6	5059.2	5001.6	4890.6	4843.8	4825.4
25°	5689.0	5486.7	5465.0	5542.2	5171.3	4899.3	4623.0	4453.3	4321.7	4215.1	4222.7
27.5°	5977.3	5714.1	5182.1	5213.7	4848.2	4466.4	4049.8	3810.5	3676.7	3573.3	3561.4
30°	6359.1	6028.4	5243.1	4518.6	4477.3	3922.5	3411.3	3146.9	3011.0	2974.0	2951.1
32.5°	6833.4	6402.6	5380.1	4359.8	3705.0	3334.0	2760.8	2547.6	2483.4	2480.1	2454.0
35°	7396.9	6897.6	5506.3	4148.8	3194.8	2715.1	2206.0	2065.7	2075.5	2076.6	2098.3
37.5°	7036.8	7365.3	5664.0	3948.6	2697.7	2017.8	1774.2	1686.0	1714.3	1760.0	1781.8
40°	7042.2	6705.0	5847.9	3614.7	2096.1	1539.2	1388.0	1368.4	1489.2	1581.6	1604.5
42.5°	7325.1	6661.5	5780.4	3233.9	1534.8	1170.4	1156.3	1261.8	1435.9	1539.2	1557.7
45°	7628.5	6868.2	4801.4	2694.4	1112.8	989.9	1098.6	1245.5	1434.8	1544.6	1555.5
47.5°	7916.8	6998.7	4602.4	2105.9	894.1	933.3	1081.2	1245.5	1442.4	1554.4	1561.0
49°	8045.2	7104.2	4417.4	1703.5	838.7	911.6	1071.5	1247.7	1444.6	1540.3	1543.5
50°	8121.3	7164.1	4268.4	1579.4	811.5	897.4	1067.1	1250.9	1441.3	1524.0	1527.2
52.5°	8239.9	7260.9	3925.8	1258.6	760.4	864.8	1060.6	1264.0	1429.3	1478.3	1476.1
55°	6795.3	6786.6	3639.7	1056.2	721.2	835.4	1058.4	1274.9	1434.8	1484.8	1482.6
57.5°	6512.5	5572.7	3066.4	863.7	688.6	810.4	1060.6	1291.2	1532.7	1619.7	1608.8
60°	6533.2	5487.8	2609.6	749.5	650.5	789.7	1067.1	1364.1	1770.9	1859.0	1831.8
62.5°	6461.4	5280.0	2335.4	673.3	610.2	771.2	1071.5	1465.2	1801.4	1809.0	1762.2
65°	6290.6	5019.0	1966.7	589.6	567.8	753.8	1070.4	1502.2	1662.1	1600.1	1584.9
67.5°	5974.0	4741.6	1556.6	516.7	522.1	727.7	1095.4	1438.0	1572.9	1522.9	1500.0
70°	5598.8	4149.9	1097.6	449.2	480.8	698.3	1092.1	1422.8	1526.1	1452.2	1420.6
72.5°	4930.9	3488.5	738.6	387.2	428.6	664.6	1036.6	1377.1	1495.7	1446.7	1403.2
75°	3919.2	2610.7	428.6	333.9	377.5	615.7	982.3	1348.8	1512.0	1418.5	1328.2
77.5°	2679.2	1487.0	319.8	279.6	325.2	552.6	890.9	1254.2	1462.0	1381.5	1260.7
80°	1200.9	537.4	244.7	227.3	273.0	448.2	768.0	1109.5	1384.7	1384.7	1299.9
82.5°	477.5	338.3	169.7	178.4	223.0	341.6	608.1	957.2	1220.5	1276.0	1364.1
85°	269.8	198.0	108.8	129.4	170.8	264.3	442.7	744.0	994.2	1101.9	1194.4
87.5°	106.6	75.1	43.5	72.9	99.0	136.0	193.6	364.4	535.2	659.2	728.8
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)