

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: P591271

Luminaire Tested: **CTN-CA8-330-727-U-T3-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591271  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-7)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-330-727-U-T3-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (8) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 28709 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type III - Medium  
BUG Rating: B4 - U0 - G3

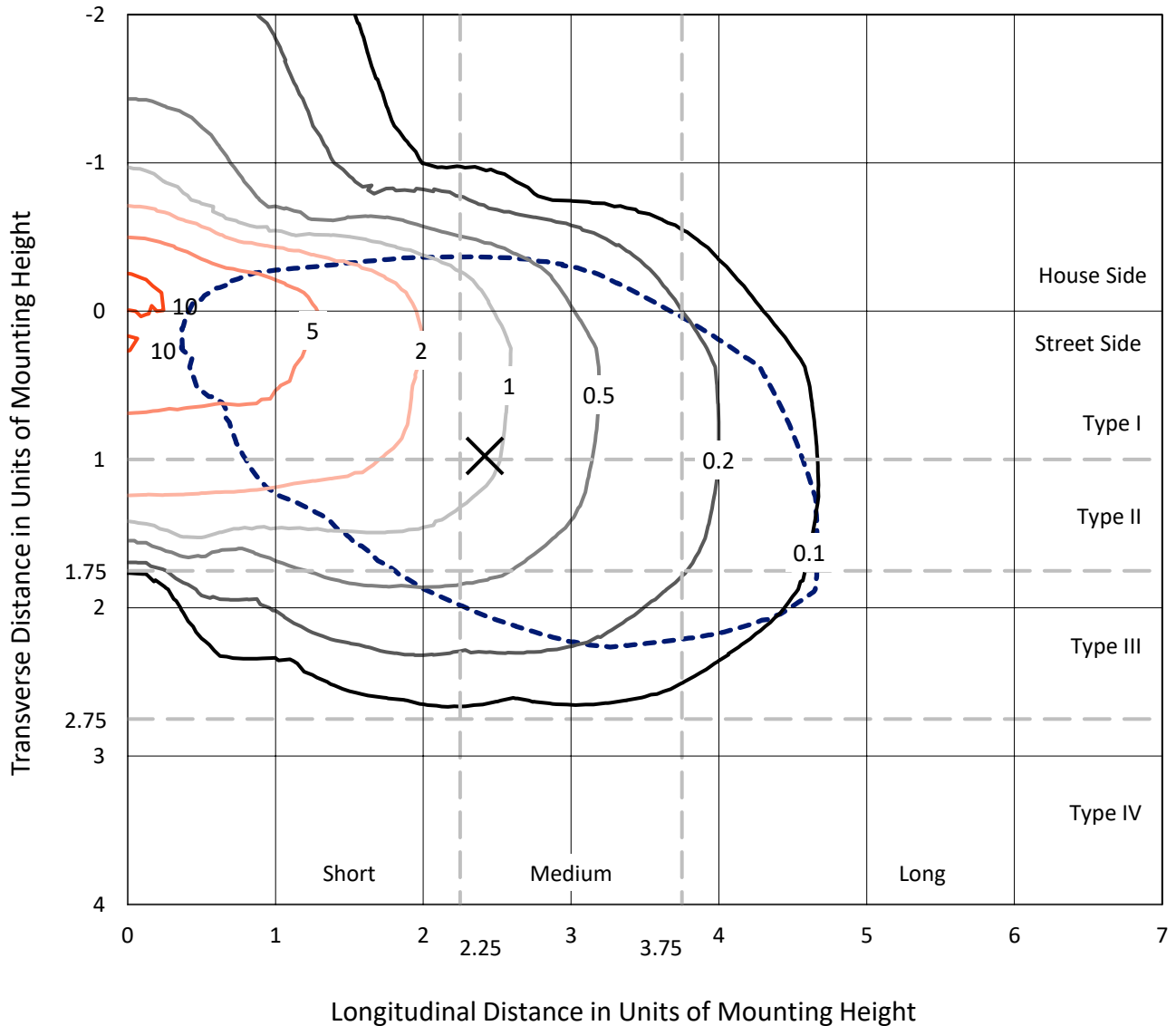
Input Watts (W): 331.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

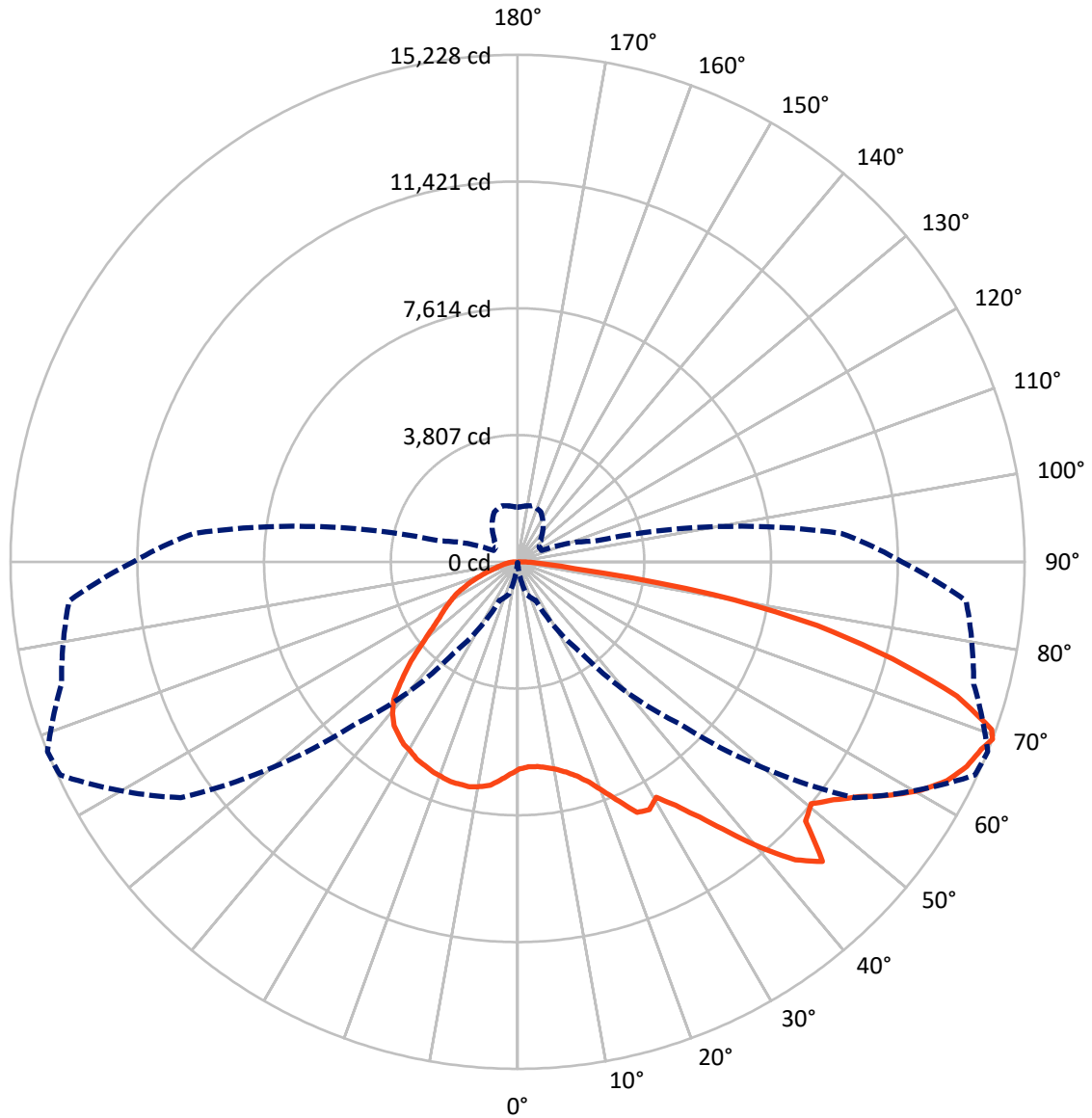
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.1 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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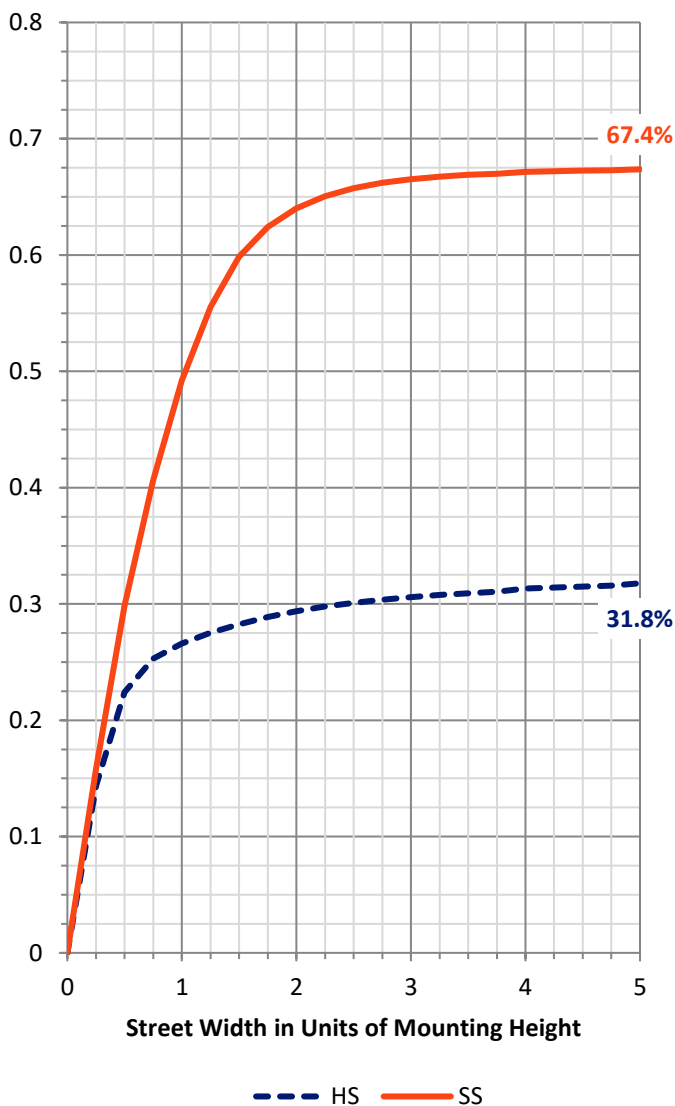
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9364.5	0.0	9364.5
	% Fixture	32.6	0.0	32.6
<b>Street Side</b>	Lumens	19344.5	0.0	19344.5
	% Fixture	67.4	0.0	67.4
<b>Total</b>	Lumens	28709.0	0.0	28709.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	621.6	2.2
10°-20°	1923.2	6.7
20°-30°	2956.8	10.3
30°-40°	3840.3	13.4
40°-50°	4740.3	16.5
50°-60°	5323.8	18.5
60°-70°	5203.0	18.1
70°-80°	3494.0	12.2
80°-90°	606.0	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°	28709.0	100.0
0°-180°	28709.0	100.0

**Coefficient of Utilization**

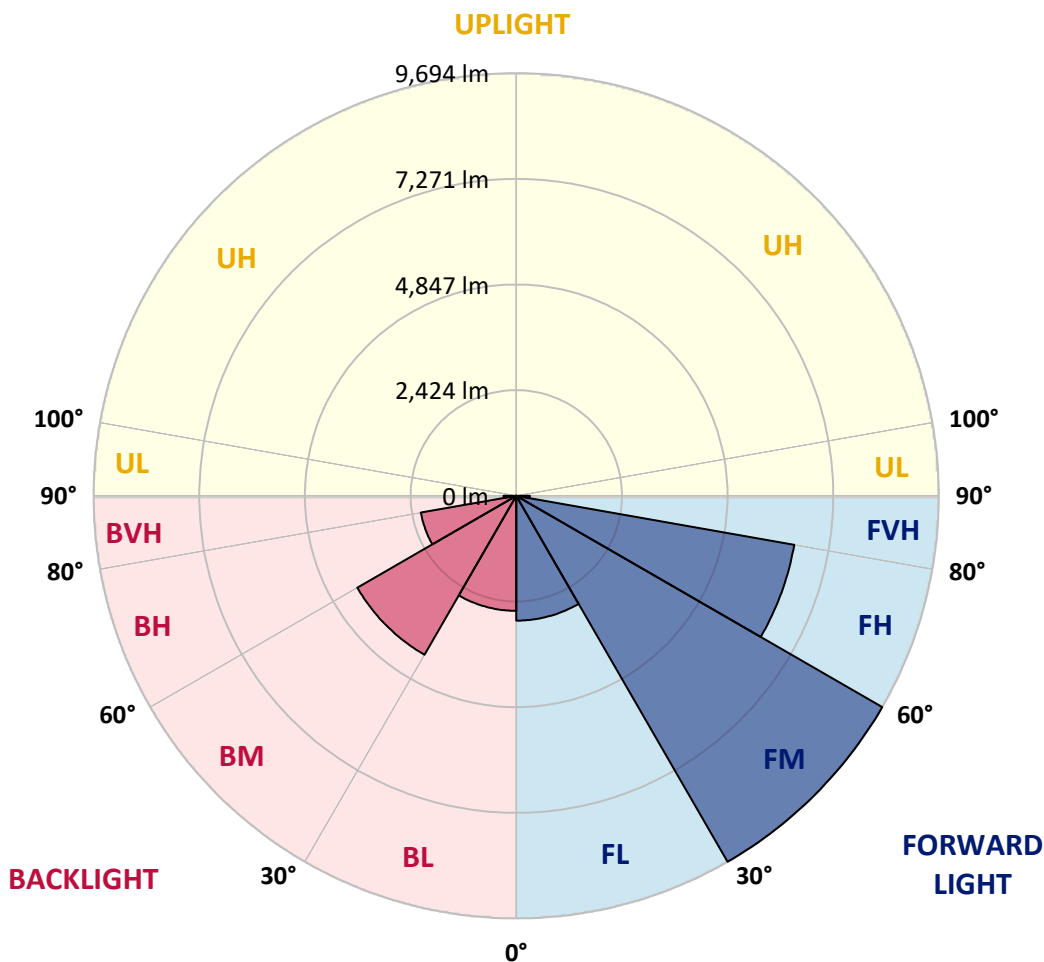


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2862.6	10.0			
FM (30°-60°)	9694.3	33.8			
FH (60°-80°)	6475.3	22.6			G3/7500
FVH (80°-90°)	312.4	1.1			G3/500
BL (0°-30°)	2639.0	9.2	B4/5000		
BM (30°-60°)	4210.2	14.7	B3/5000		
BH (60°-80°)	2221.6	7.7	B3/2500		G3/2500
BVH (80°-90°)	293.6	1.0			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G3**  
 Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3
2.5°	6097.7	6060.6	6074.7	6125.9	6022.1	6090.0	6058.0	6127.2	6163.0	6147.7	6245.0
5°	6155.4	6114.4	6116.9	6152.8	6041.3	6099.0	6063.1	6137.4	6177.1	6155.4	6286.0
7.5°	6330.9	6286.0	6273.2	6270.7	6165.6	6209.2	6137.4	6197.6	6238.6	6227.1	6374.4
10°	6599.9	6546.1	6521.7	6507.6	6382.1	6369.3	6279.6	6306.5	6337.3	6350.1	6508.9
12.5°	6895.8	6822.8	6807.4	6765.1	6603.7	6575.5	6466.6	6479.5	6479.5	6508.9	6666.5
15°	7146.9	7086.7	7086.7	7043.1	6885.5	6845.8	6696.0	6680.6	6678.0	6701.1	6842.0
17.5°	6985.5	6952.2	6922.7	6900.9	6657.5	6593.5	6999.6	6972.7	6959.8	6982.9	7064.9
20°	6443.6	6533.3	6343.7	6075.9	6114.4	6885.5	7390.3	7341.6	7349.3	7372.3	7349.3
22.5°	5671.1	5449.5	5798.0	5894.0	6054.2	6624.2	7746.4	7797.6	7813.0	7814.3	7693.9
25°	4860.2	4983.2	5455.9	6188.7	6168.2	6643.4	7529.9	8258.8	8335.7	8328.0	8119.2
27.5°	5093.4	5070.3	5435.4	5917.1	6525.6	7050.8	7663.1	7987.2	8427.9	8916.0	8632.9
30°	5297.1	5277.9	5316.3	5990.1	6761.3	7458.2	8161.5	8108.9	8202.4	9086.4	9238.8
32.5°	5479.0	5464.9	5509.7	5584.0	6369.3	7897.6	8695.6	8685.4	8717.4	8786.6	9953.6
35°	5650.6	5651.9	5707.0	5828.7	6419.3	7988.5	9223.4	9332.3	9416.9	9569.3	9830.6
37.5°	5768.5	5771.0	5814.6	5961.9	6209.2	7538.9	9757.6	10145.8	10296.9	10571.1	10200.9
40°	5767.2	5786.4	5891.5	6083.6	6414.1	7241.7	9922.9	11068.1	11311.5	11511.4	10888.8
42.5°	5646.8	5657.0	5853.0	6200.2	6596.0	7467.1	9409.2	11967.4	12237.7	12182.6	11457.6
45°	5536.6	5534.1	5757.0	6184.8	6758.7	7777.1	9478.4	11941.8	12839.8	12773.2	11980.2
47.5°	5389.3	5393.1	5628.9	6118.2	6907.3	8108.9	9990.8	10859.3	11636.9	13280.5	12405.5
50°	5204.8	5227.9	5467.4	6017.0	6981.6	8418.9	10434.0	11334.6	11426.8	11927.7	12821.8
52.5°	4898.7	4857.7	5294.5	5900.4	7034.1	8644.4	10856.7	11790.6	11877.7	11695.8	13245.9
55°	2781.1	3451.1	5078.0	5764.6	7049.5	8780.2	11184.7	12309.4	12445.2	12273.6	13590.5
57.5°	1747.3	1801.1	4399.1	5404.7	6920.1	8864.7	11586.9	13021.7	13222.8	12814.2	13851.8
60°	618.7	667.4	2139.3	2481.4	5672.4	8631.6	12199.3	13860.8	13927.4	13322.7	14044.0
62.5°	65.3	85.8	1450.1	1821.6	4404.2	7965.5	12622.0	14535.9	14475.7	13699.4	14147.7
65°	23.1	32.0	1274.6	1629.5	4099.3	7757.9	12761.6	14824.1	14822.8	13940.2	14073.4
67.5°	17.9	24.3	1108.1	1415.5	3658.6	7313.4	12529.8	15040.6	15020.1	14178.5	13877.4
69°	17.9	25.6	997.9	1275.9	3339.7	6888.1	12350.4	15154.6	15227.6	14182.3	13522.6
70°	17.9	25.6	927.5	1178.5	3079.6	6498.7	12092.9	15067.5	15104.6	14059.3	13154.9
72.5°	17.9	25.6	718.7	912.1	2341.7	5002.4	10594.1	13730.1	13800.6	12979.4	11822.6
75°	17.9	25.6	506.0	663.6	1537.2	3356.3	8435.6	11435.8	11626.6	10969.5	9687.2
77.5°	17.9	25.6	302.3	453.5	964.6	1842.1	5804.4	8764.8	9196.5	8584.2	6924.0
80°	17.9	24.3	142.2	247.2	549.6	976.1	2659.4	5395.7	5958.1	5370.1	3621.5
82.5°	17.9	24.3	116.6	178.1	278.0	485.5	1038.9	1767.8	1735.8	1559.0	1167.0
85°	16.7	21.8	96.1	130.7	199.8	307.4	579.0	719.9	686.6	607.2	611.1
87.5°	11.5	12.8	33.3	58.9	80.7	152.4	280.5	304.9	311.3	260.0	272.9
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°	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3	6223.3
2.5°	6291.1	6298.8	6336.0	6402.6	6401.3	6473.1	6453.8	6620.4	6626.8	6624.2	6637.0
5°	6348.8	6392.3	6474.3	6616.5	6698.5	6806.1	6785.6	6953.4	6963.7	6949.6	6985.5
7.5°	6448.7	6502.5	6637.0	6812.5	6834.3	6970.1	6941.9	7077.7	7071.3	7045.7	7107.2
10°	6589.6	6653.7	6775.4	6875.3	6938.1	7017.5	6986.7	7102.0	7080.3	7052.1	7111.0
12.5°	6733.1	6763.8	6831.7	6944.5	6949.6	6967.5	6931.7	7025.2	7000.8	6958.6	7020.1
15°	6870.2	6874.0	6862.5	6913.7	6859.9	6871.5	6793.3	6852.2	6810.0	6790.8	6830.5
17.5°	7048.2	7002.1	6920.1	6898.4	6771.5	6717.7	6602.4	6599.9	6525.6	6498.7	6525.6
20°	7262.2	7162.2	6972.7	6792.0	6573.0	6462.8	6266.8	6214.3	6154.1	6096.4	6128.5
22.5°	7558.1	7364.7	7038.0	6701.1	6338.5	6122.1	5881.2	5732.6	5619.9	5508.4	5541.7
25°	7895.0	7624.7	7130.2	6546.1	6058.0	5675.0	5362.4	5108.8	4947.3	4784.7	4857.7
27.5°	8351.0	7978.3	7186.6	6430.8	5692.9	5179.2	4680.9	4350.4	4182.6	4066.0	4028.8
30°	8882.7	8435.6	7287.8	6204.0	5263.8	4569.4	3936.6	3567.7	3389.6	3334.5	3357.6
32.5°	9530.9	8991.6	7494.0	6014.4	4828.2	3922.5	3184.6	2896.4	2768.3	2759.3	2756.8
35°	10398.1	9701.3	7670.8	5719.8	4251.7	3168.0	2533.9	2295.6	2290.5	2286.6	2295.6
37.5°	11064.3	10423.8	7859.1	5431.6	3567.7	2473.7	2026.6	1881.8	1866.5	1911.3	1922.8
40°	11589.5	10941.3	8141.0	4944.8	2765.7	1847.2	1556.5	1502.7	1611.5	1710.2	1730.7
42.5°	12063.5	11376.8	8202.4	4426.0	2015.1	1418.1	1290.0	1379.7	1547.5	1660.2	1682.0
45°	12508.0	11834.2	7968.0	3654.8	1441.2	1201.6	1227.2	1361.7	1550.0	1670.5	1683.3
47.5°	12993.5	12140.3	7714.4	2938.7	1185.0	1151.6	1214.4	1368.1	1565.4	1687.1	1693.5
50°	13313.8	12359.4	7080.3	2298.2	1110.7	1120.9	1209.3	1382.2	1568.0	1655.1	1660.2
52.5°	13444.4	12534.9	6506.4	1839.6	1073.5	1097.8	1215.7	1406.6	1561.6	1610.3	1607.7
55°	13526.4	12615.6	6013.2	1530.8	1040.2	1079.9	1227.2	1424.5	1575.7	1625.6	1625.6
57.5°	13473.9	12435.0	5646.8	1304.1	1006.9	1067.1	1241.3	1451.4	1708.9	1797.3	1788.3
60°	13435.5	12096.8	5126.7	1151.6	967.2	1053.0	1259.3	1544.9	1993.3	2083.0	2053.5
62.5°	13236.9	11811.1	4563.0	1054.3	922.3	1045.3	1274.6	1670.5	2033.0	2027.9	1970.2
65°	12730.9	11229.5	3674.0	955.6	876.2	1035.1	1279.8	1725.6	1870.3	1789.6	1772.9
67.5°	12013.5	10390.5	2899.0	857.0	825.0	1013.3	1322.0	1660.2	1779.4	1710.2	1684.6
69°	11544.7	9769.2	2408.3	795.5	791.7	995.4	1338.7	1653.8	1746.0	1667.9	1634.6
70°	11166.8	9231.1	2079.1	755.8	766.1	981.3	1322.0	1652.5	1732.0	1634.6	1597.4
72.5°	9545.0	7478.7	1342.5	661.0	690.5	944.1	1259.3	1610.3	1702.5	1638.4	1587.2
75°	7396.7	5444.4	868.5	571.3	611.1	881.4	1196.5	1583.4	1729.4	1612.8	1502.7
77.5°	4746.2	2913.1	672.5	480.4	525.2	793.0	1083.8	1474.5	1679.4	1574.4	1432.2
80°	2067.6	1081.2	518.8	389.4	425.3	644.4	930.0	1310.5	1592.3	1580.8	1484.7
82.5°	877.5	696.9	399.7	298.5	338.2	476.5	728.9	1123.5	1406.6	1461.7	1566.7
85°	497.0	417.6	266.5	205.0	251.1	351.0	518.8	862.1	1145.2	1269.5	1357.9
87.5°	213.9	174.2	123.0	110.2	142.2	181.9	222.9	404.8	611.1	745.6	801.9
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)