

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: P591211

Luminaire Tested: **CTN-CA10-310-727-U-T3-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591211  
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-CA10-310-727-U-T3-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 28418 lumens  
Efficiency: N/A  
Efficacy: 91.0 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type III - Medium  
BUG Rating: B4 - U0 - G3

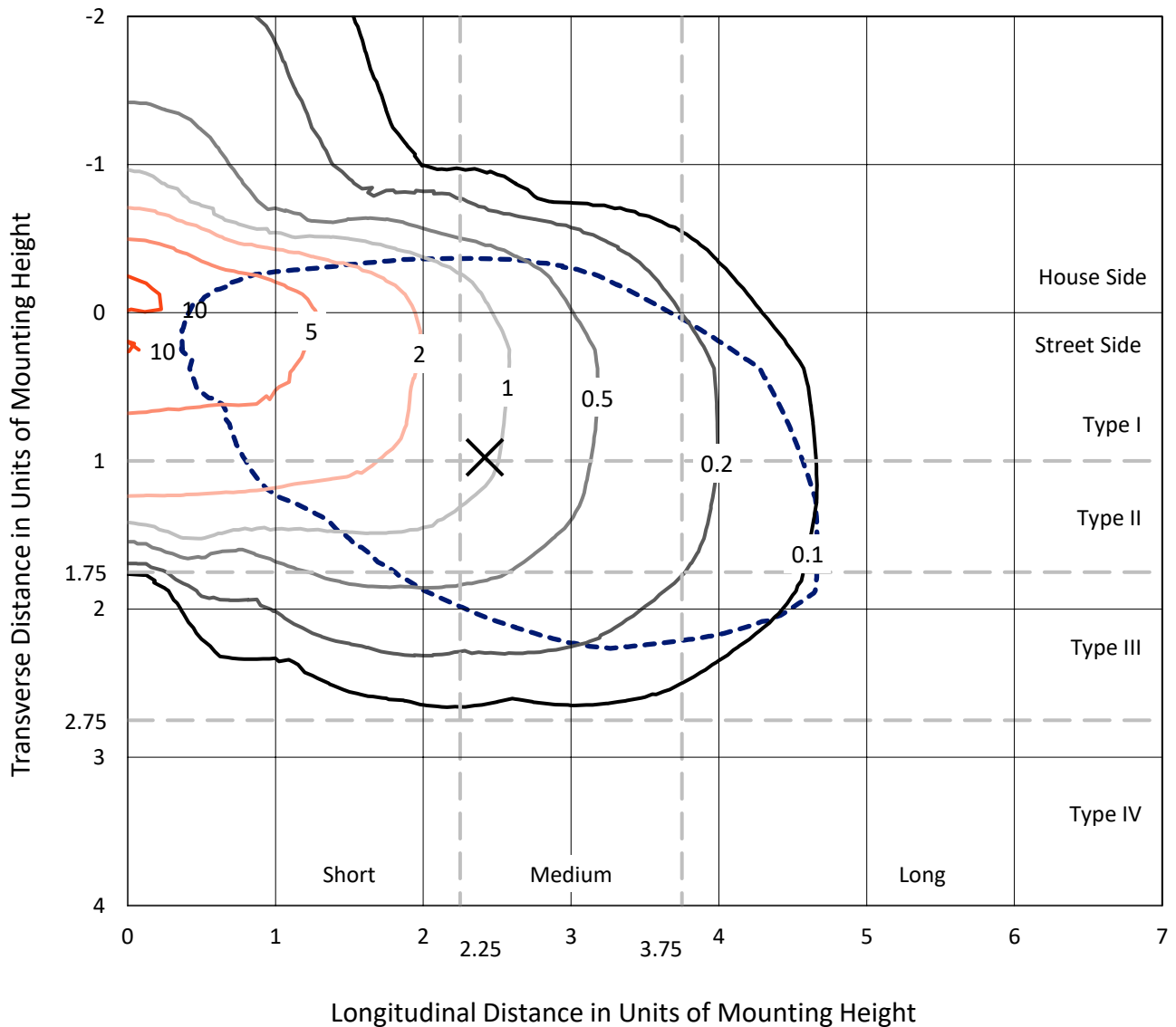
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

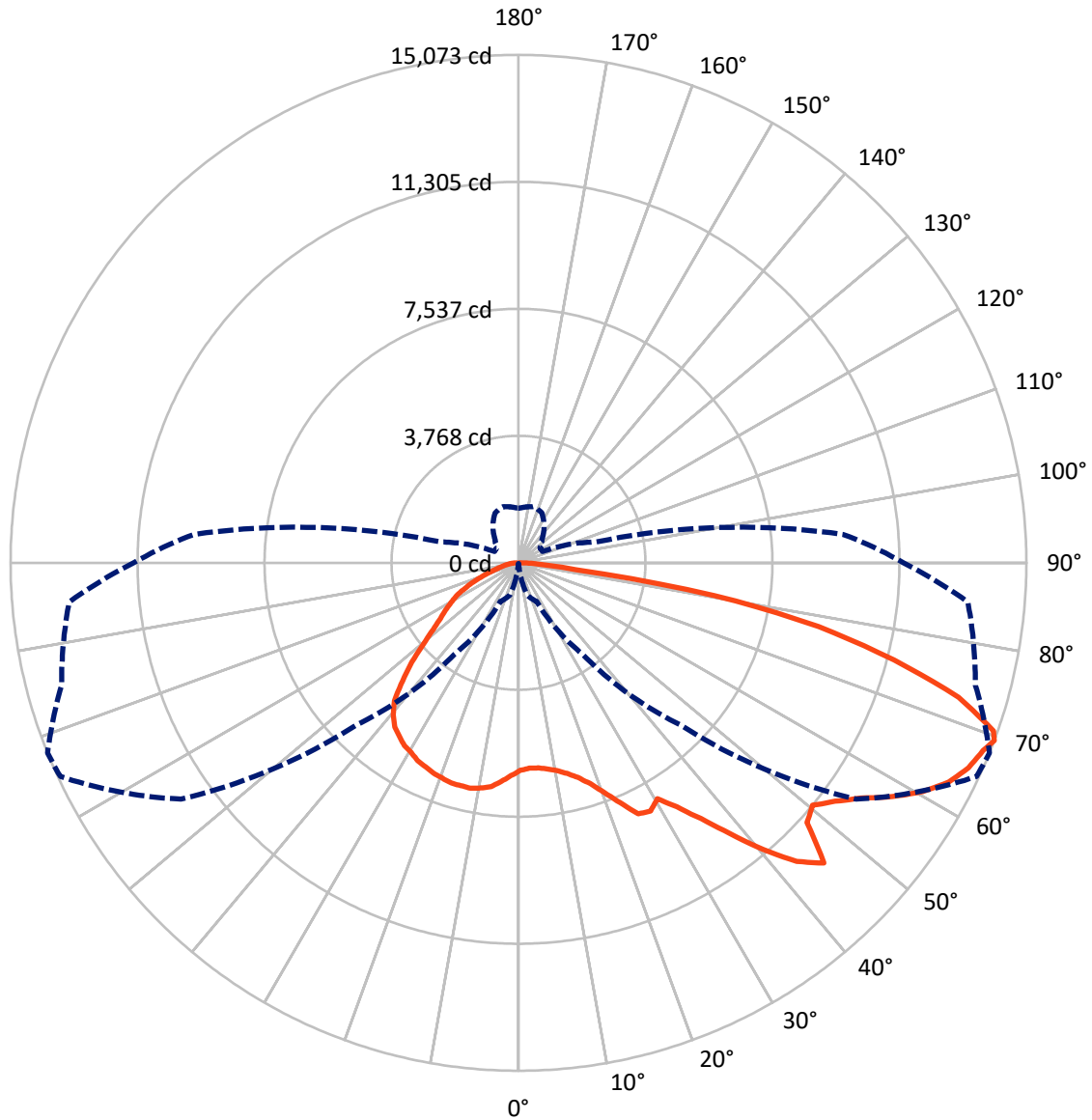
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11 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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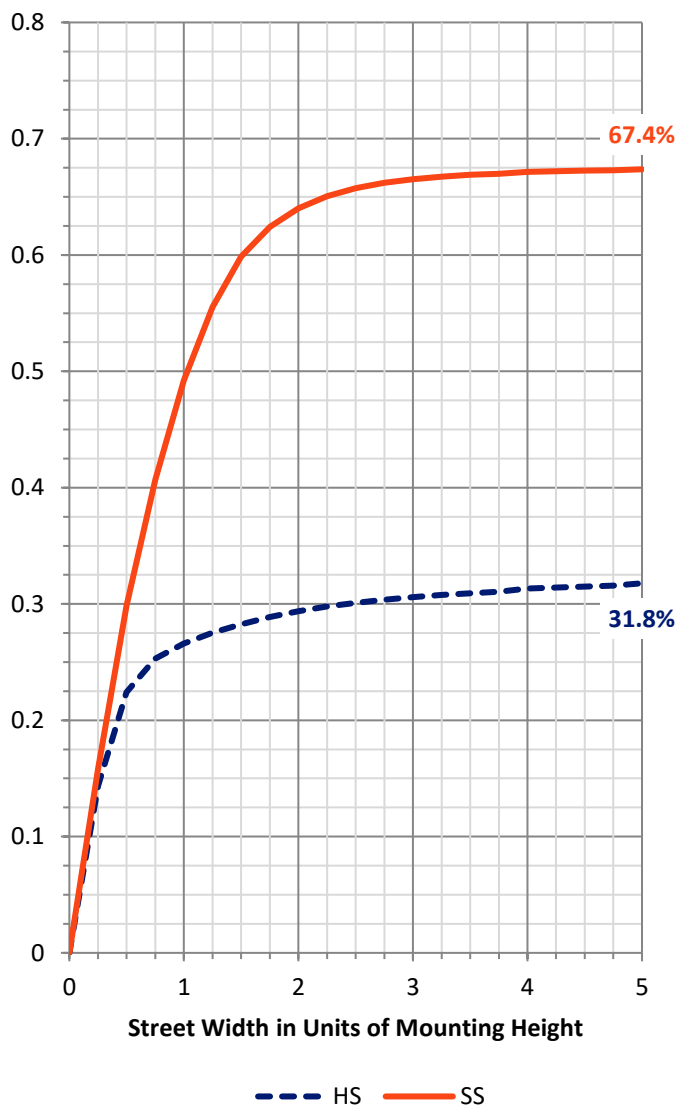
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9269.5	0.0	9269.5
	% Fixture	32.6	0.0	32.6
<b>Street Side</b>	Lumens	19148.5	0.0	19148.5
	% Fixture	67.4	0.0	67.4
<b>Total</b>	Lumens	28418.0	0.0	28418.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	615.3	2.2
10°-20°	1903.7	6.7
20°-30°	2926.8	10.3
30°-40°	3801.4	13.4
40°-50°	4692.3	16.5
50°-60°	5269.9	18.5
60°-70°	5150.3	18.1
70°-80°	3458.5	12.2
80°-90°	599.9	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°	28418.0	100.0
0°-180°	28418.0	100.0

**Coefficient of Utilization**

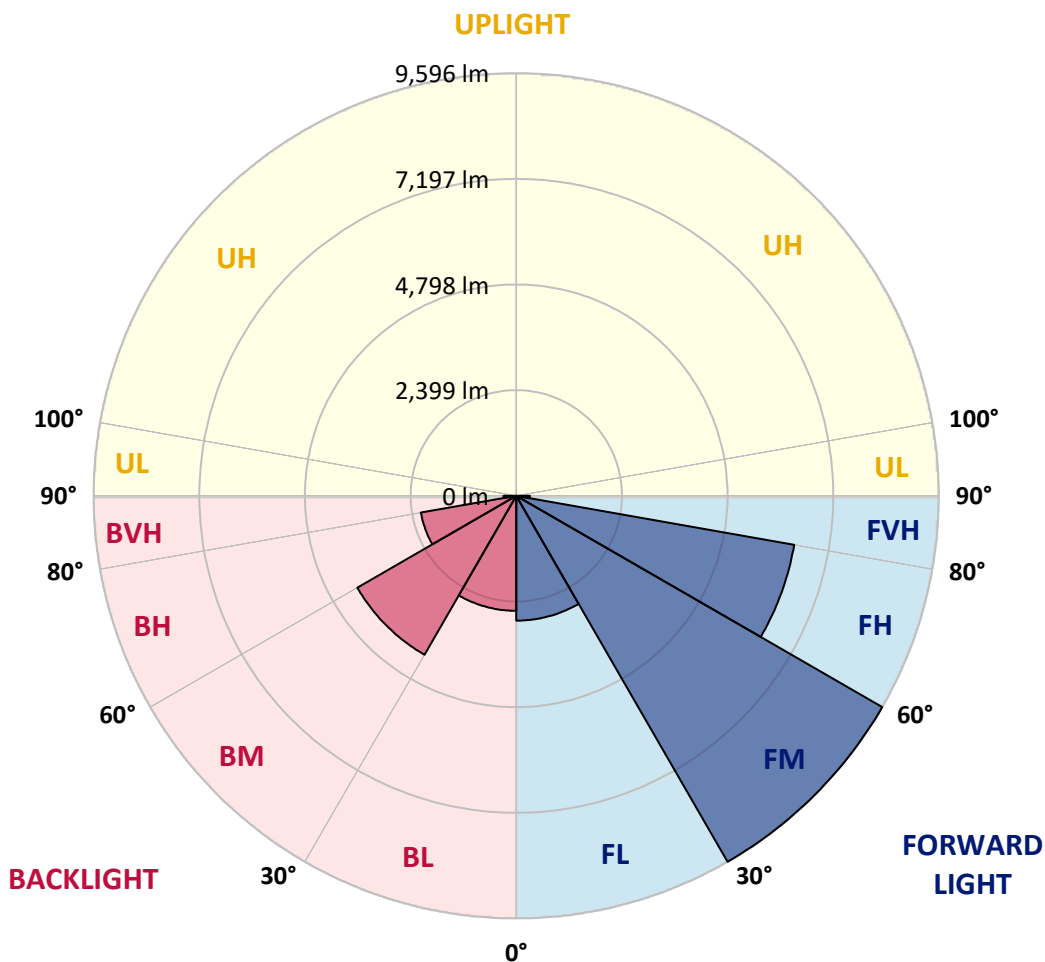


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2833.5	10.0			
FM (30°-60°)	9596.0	33.8			
FH (60°-80°)	6409.7	22.6			G3/7500
FVH (80°-90°)	309.2	1.1			G3/500
BL (0°-30°)	2612.2	9.2	B4/5000		
BM (30°-60°)	4167.5	14.7	B3/5000		
BH (60°-80°)	2199.1	7.7	B3/2500		G3/2500
BVH (80°-90°)	290.7	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°	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2
2.5°	6035.9	5999.1	6013.1	6063.8	5961.1	6028.3	5996.6	6065.1	6100.6	6085.4	6181.7
5°	6093.0	6052.4	6054.9	6090.4	5980.1	6037.2	6001.7	6075.2	6114.5	6093.0	6222.3
7.5°	6266.7	6222.3	6209.6	6207.1	6103.1	6146.2	6075.2	6134.8	6175.4	6164.0	6309.8
10°	6533.0	6479.7	6455.6	6441.7	6317.4	6304.7	6216.0	6242.6	6273.0	6285.7	6442.9
12.5°	6825.9	6753.6	6738.4	6696.6	6536.8	6508.9	6401.1	6413.8	6413.8	6442.9	6598.9
15°	7074.4	7014.8	7014.8	6971.7	6815.8	6776.4	6628.1	6612.9	6610.3	6633.2	6772.6
17.5°	6914.7	6881.7	6852.5	6831.0	6590.0	6526.6	6928.6	6902.0	6889.3	6912.1	6993.3
20°	6378.3	6467.0	6279.4	6014.3	6052.4	6815.8	7315.4	7267.2	7274.8	7297.6	7274.8
22.5°	5613.6	5394.3	5739.2	5834.3	5992.8	6557.1	7667.9	7718.6	7733.8	7735.1	7615.9
25°	4811.0	4932.7	5400.6	6125.9	6105.6	6576.1	7453.6	8175.1	8251.2	8243.6	8036.9
27.5°	5041.8	5018.9	5380.3	5857.1	6459.4	6979.3	7585.5	7906.3	8342.5	8825.6	8545.4
30°	5243.4	5224.4	5262.4	5929.4	6692.8	7382.6	8078.7	8026.7	8119.3	8994.3	9145.2
32.5°	5423.4	5409.5	5453.9	5527.4	6304.7	7817.5	8607.5	8597.4	8629.1	8697.5	9852.7
35°	5593.4	5594.6	5649.2	5769.6	6354.2	7907.5	9129.9	9237.7	9321.4	9472.3	9731.0
37.5°	5710.0	5712.6	5755.7	5901.5	6146.2	7462.5	9658.7	10042.9	10192.6	10463.9	10097.5
40°	5708.7	5727.8	5831.7	6022.0	6349.1	7168.3	9822.3	10955.9	11196.9	11394.7	10778.4
42.5°	5589.6	5599.7	5793.7	6137.3	6529.2	7391.4	9313.8	11846.1	12113.7	12059.1	11341.4
45°	5480.5	5478.0	5698.6	6122.1	6690.2	7698.3	9382.3	11820.7	12709.6	12643.7	11858.8
47.5°	5334.7	5338.5	5571.8	6056.2	6837.3	8026.7	9889.5	10749.2	11518.9	13145.8	12279.8
50°	5152.1	5174.9	5412.0	5956.0	6910.9	8333.6	10328.2	11219.7	11311.0	11806.8	12691.9
52.5°	4849.0	4808.4	5240.8	5840.6	6962.8	8556.8	10746.7	11671.1	11757.3	11577.3	13111.6
55°	2752.9	3416.1	5026.5	5706.2	6978.1	8691.2	11071.3	12184.7	12319.1	12149.2	13452.7
57.5°	1729.6	1782.9	4354.5	5349.9	6850.0	8774.9	11469.5	12889.7	13088.8	12684.3	13711.4
60°	612.5	660.7	2117.6	2456.2	5614.9	8544.1	12075.6	13720.3	13786.2	13187.7	13901.6
62.5°	64.7	85.0	1435.4	1803.2	4359.5	7884.7	12494.1	14388.5	14328.9	13560.5	14004.3
65°	22.8	31.7	1261.7	1613.0	4057.8	7679.3	12632.3	14673.8	14672.6	13798.9	13930.8
67.5°	17.8	24.1	1096.9	1401.2	3621.5	7239.3	12402.8	14888.1	14867.9	14034.7	13736.8
69°	17.8	25.4	987.8	1263.0	3305.8	6818.3	12225.2	15001.0	15073.3	14038.6	13385.5
70°	17.8	25.4	918.1	1166.6	3048.4	6432.8	11970.4	14914.8	14951.5	13916.8	13021.6
72.5°	17.8	25.4	711.4	902.8	2318.0	4951.7	10486.8	13590.9	13660.7	12847.9	11702.8
75°	17.8	25.4	500.9	656.8	1521.7	3322.3	8350.1	11319.9	11508.8	10858.3	9589.0
77.5°	17.8	25.4	299.3	448.9	954.8	1823.5	5745.5	8676.0	9103.3	8497.2	6853.8
80°	17.8	24.1	140.8	244.7	544.0	966.3	2632.5	5341.0	5897.7	5315.7	3584.8
82.5°	17.8	24.1	115.4	176.3	275.2	480.6	1028.4	1749.9	1718.2	1543.2	1155.2
85°	16.5	21.6	95.1	129.3	197.8	304.3	573.2	712.6	679.7	601.1	604.9
87.5°	11.4	12.7	33.0	58.3	79.9	150.9	277.7	301.8	308.1	257.4	270.1
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°	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2	6160.2
2.5°	6227.4	6235.0	6271.8	6337.7	6336.4	6407.4	6388.4	6553.3	6559.6	6557.1	6569.8
5°	6284.4	6327.6	6408.7	6549.5	6630.6	6737.1	6716.8	6883.0	6893.1	6879.2	6914.7
7.5°	6383.3	6436.6	6569.8	6743.5	6765.0	6899.4	6871.5	7006.0	6999.6	6974.3	7035.1
10°	6522.8	6586.2	6706.7	6805.6	6867.7	6946.4	6915.9	7030.1	7008.5	6980.6	7038.9
12.5°	6664.9	6695.3	6762.5	6874.1	6879.2	6896.9	6861.4	6954.0	6929.9	6888.0	6948.9
15°	6800.5	6804.3	6792.9	6843.7	6790.4	6801.8	6724.5	6782.8	6740.9	6721.9	6761.2
17.5°	6976.8	6931.1	6850.0	6828.4	6702.9	6649.6	6535.5	6533.0	6459.4	6432.8	6459.4
20°	7188.6	7089.7	6902.0	6723.2	6506.4	6397.3	6203.3	6151.3	6091.7	6034.6	6066.3
22.5°	7481.5	7290.0	6966.7	6633.2	6274.3	6060.0	5821.6	5674.5	5562.9	5452.6	5485.6
25°	7815.0	7547.4	7058.0	6479.7	5996.6	5617.4	5308.0	5057.0	4897.2	4736.2	4808.4
27.5°	8266.4	7897.4	7113.7	6365.6	5635.2	5126.7	4633.4	4306.3	4140.2	4024.8	3988.0
30°	8792.6	8350.1	7213.9	6141.2	5210.4	4523.1	3896.7	3531.5	3355.3	3300.7	3323.6
32.5°	9434.3	8900.4	7418.1	5953.5	4779.3	3882.8	3152.4	2867.1	2740.3	2731.4	2728.8
35°	10292.7	9602.9	7593.1	5661.8	4208.6	3135.9	2508.2	2272.3	2267.3	2263.5	2272.3
37.5°	10952.1	10318.1	7779.5	5376.5	3531.5	2448.6	2006.1	1862.8	1847.5	1891.9	1903.3
40°	11472.0	10830.4	8058.4	4894.7	2737.7	1828.5	1540.7	1487.4	1595.2	1692.8	1713.1
42.5°	11941.2	11261.5	8119.3	4381.1	1994.6	1403.7	1276.9	1365.7	1531.8	1643.4	1664.9
45°	12381.2	11714.2	7887.3	3617.7	1426.6	1189.4	1214.8	1347.9	1534.3	1653.5	1666.2
47.5°	12861.8	12017.3	7636.2	2908.9	1172.9	1140.0	1202.1	1354.3	1549.6	1670.0	1676.4
50°	13178.8	12234.1	7008.5	2274.9	1099.4	1109.5	1197.0	1368.2	1552.1	1638.3	1643.4
52.5°	13308.2	12407.8	6440.4	1820.9	1062.6	1086.7	1203.4	1392.3	1545.7	1593.9	1591.4
55°	13389.3	12487.7	5952.2	1515.3	1029.7	1069.0	1214.8	1410.1	1559.7	1609.2	1609.2
57.5°	13337.3	12308.9	5589.6	1290.9	996.7	1056.3	1228.7	1436.7	1691.6	1779.1	1770.2
60°	13299.3	11974.2	5074.7	1140.0	957.4	1042.3	1246.5	1529.3	1973.1	2061.8	2032.7
62.5°	13102.7	11691.4	4516.8	1043.6	913.0	1034.7	1261.7	1653.5	2012.4	2007.3	1950.3
65°	12601.9	11115.7	3636.8	946.0	867.3	1024.6	1266.8	1708.1	1851.3	1771.5	1755.0
67.5°	11891.7	10285.1	2869.6	848.3	816.6	1003.0	1308.6	1643.4	1761.3	1692.8	1667.5
69°	11427.6	9670.1	2383.9	787.5	783.7	985.3	1325.1	1637.0	1728.3	1651.0	1618.0
70°	11053.6	9137.5	2058.0	748.1	758.3	971.3	1308.6	1635.8	1714.4	1618.0	1581.3
72.5°	9448.2	7402.9	1328.9	654.3	683.5	934.6	1246.5	1593.9	1685.2	1621.8	1571.1
75°	7321.7	5389.2	859.7	565.5	604.9	872.4	1184.4	1567.3	1711.9	1596.5	1487.4
77.5°	4698.1	2883.5	665.7	475.5	519.9	784.9	1072.8	1459.5	1662.4	1558.4	1417.7
80°	2046.6	1070.2	513.6	385.5	421.0	637.8	920.6	1297.2	1576.2	1564.8	1469.7
82.5°	868.6	689.8	395.6	295.5	334.8	471.7	721.5	1112.1	1392.3	1446.8	1550.8
85°	492.0	413.4	263.8	202.9	248.5	347.4	513.6	853.4	1133.6	1256.6	1344.1
87.5°	211.8	172.5	121.7	109.1	140.8	180.1	220.6	400.7	604.9	738.0	793.8
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)