

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: P591307

Luminaire Tested: **CTN-CA10-310-730-U-T3-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591307  
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-CA10-310-730-U-T3-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 32952 lumens  
Efficiency: N/A  
Efficacy: 105.5 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type III - Medium  
BUG Rating: B4 - U0 - G4

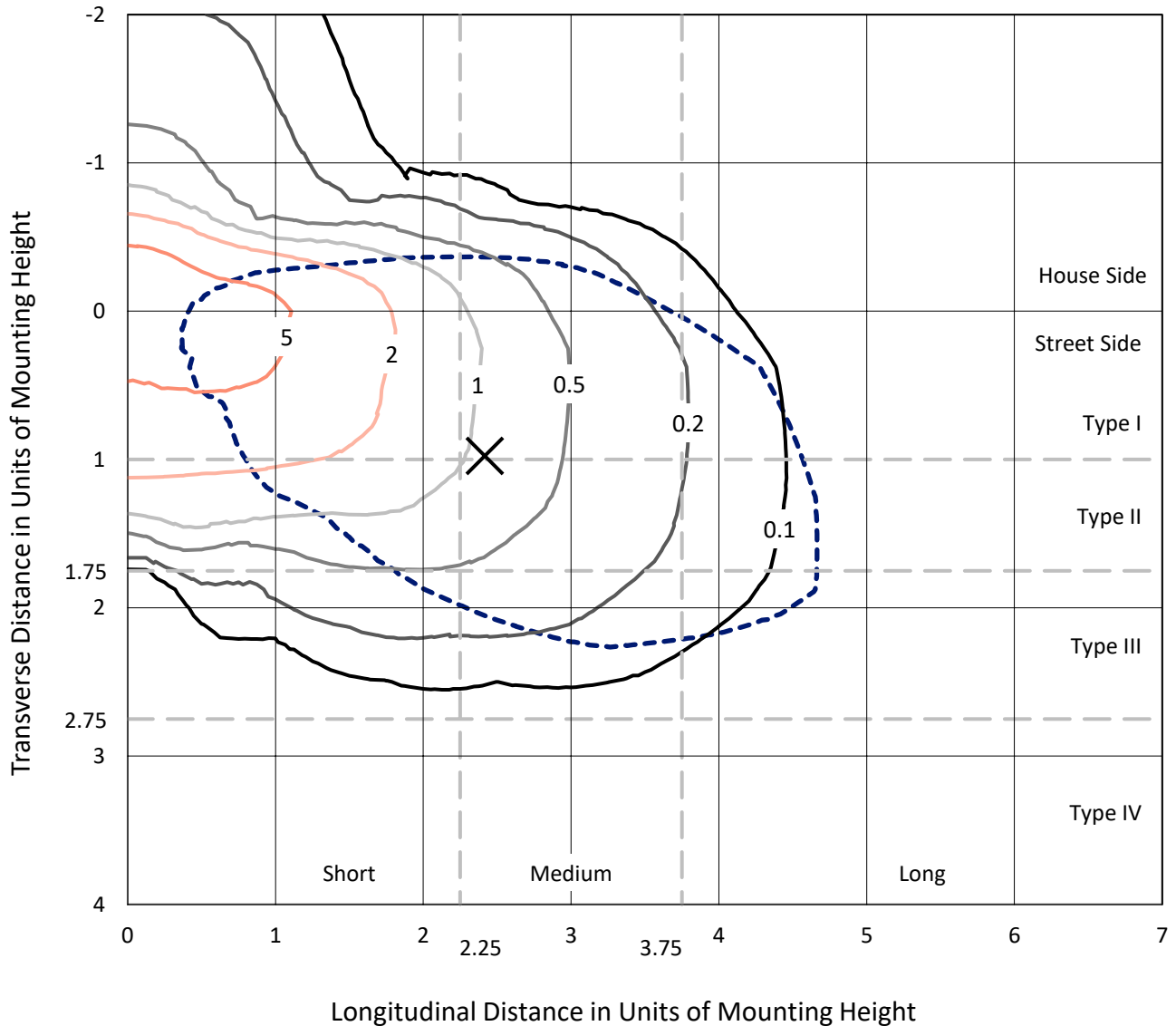
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

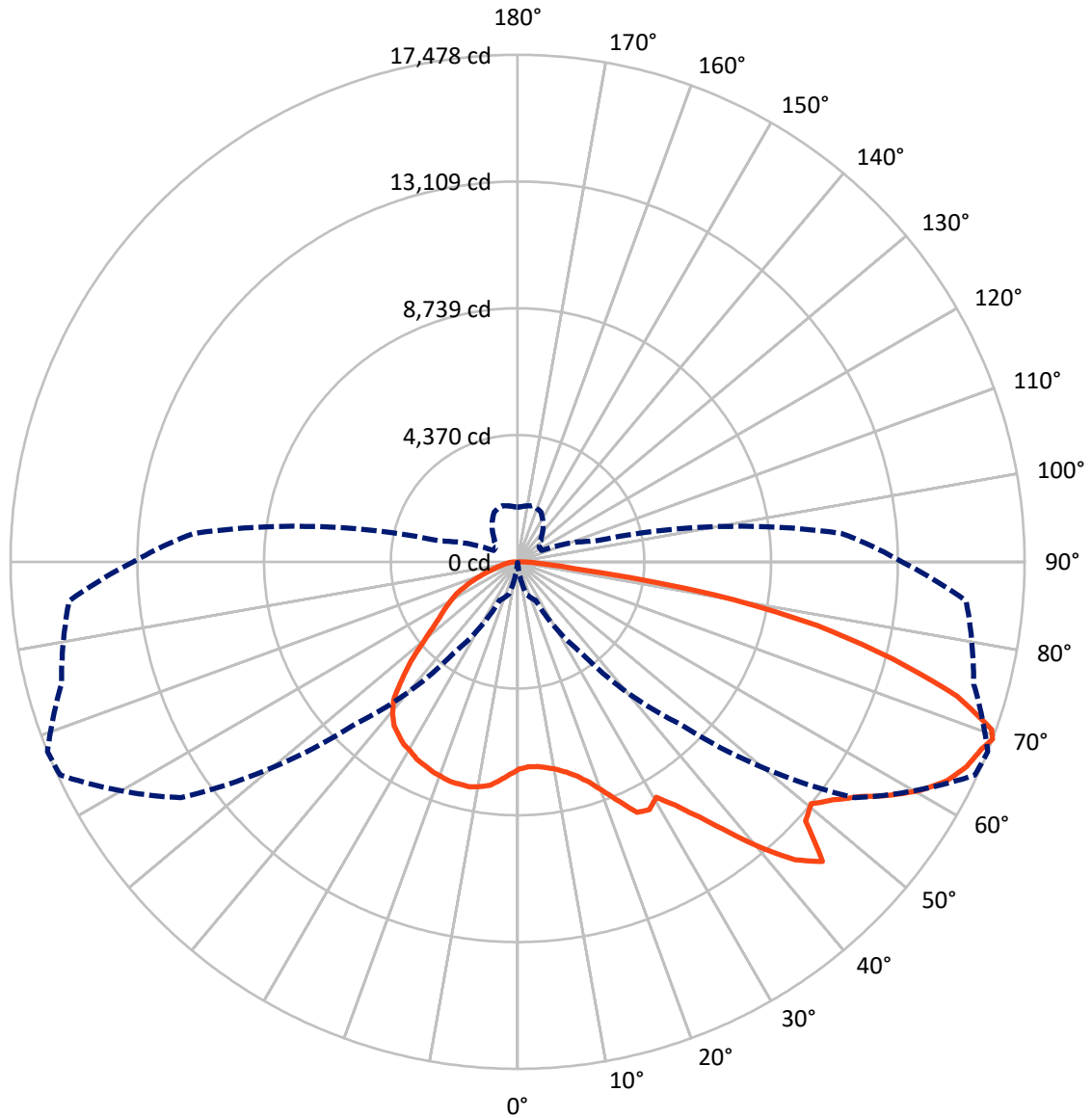
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.8 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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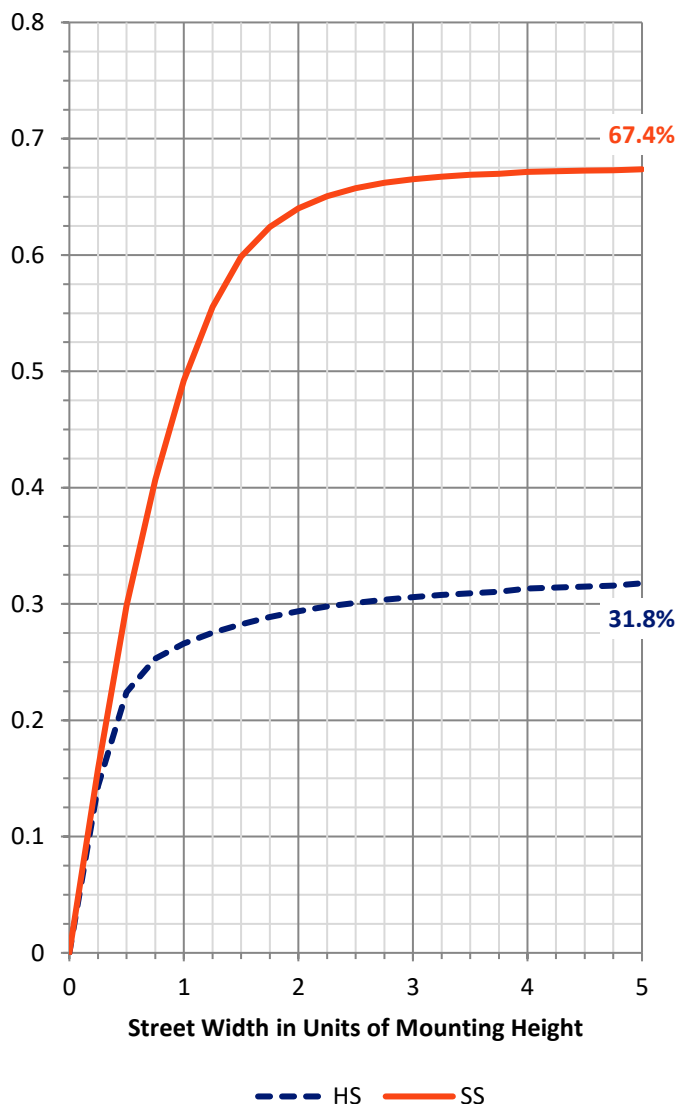
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10748.5	0.0	10748.5
	% Fixture	32.6	0.0	32.6
<b>Street Side</b>	Lumens	22203.5	0.0	22203.5
	% Fixture	67.4	0.0	67.4
<b>Total</b>	Lumens	32952.0	0.0	32952.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	713.4	2.2
10°-20°	2207.4	6.7
20°-30°	3393.8	10.3
30°-40°	4407.9	13.4
40°-50°	5440.9	16.5
50°-60°	6110.7	18.5
60°-70°	5972.0	18.1
70°-80°	4010.3	12.2
80°-90°	695.6	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°	32952.0	100.0
0°-180°	32952.0	100.0

**Coefficient of Utilization**

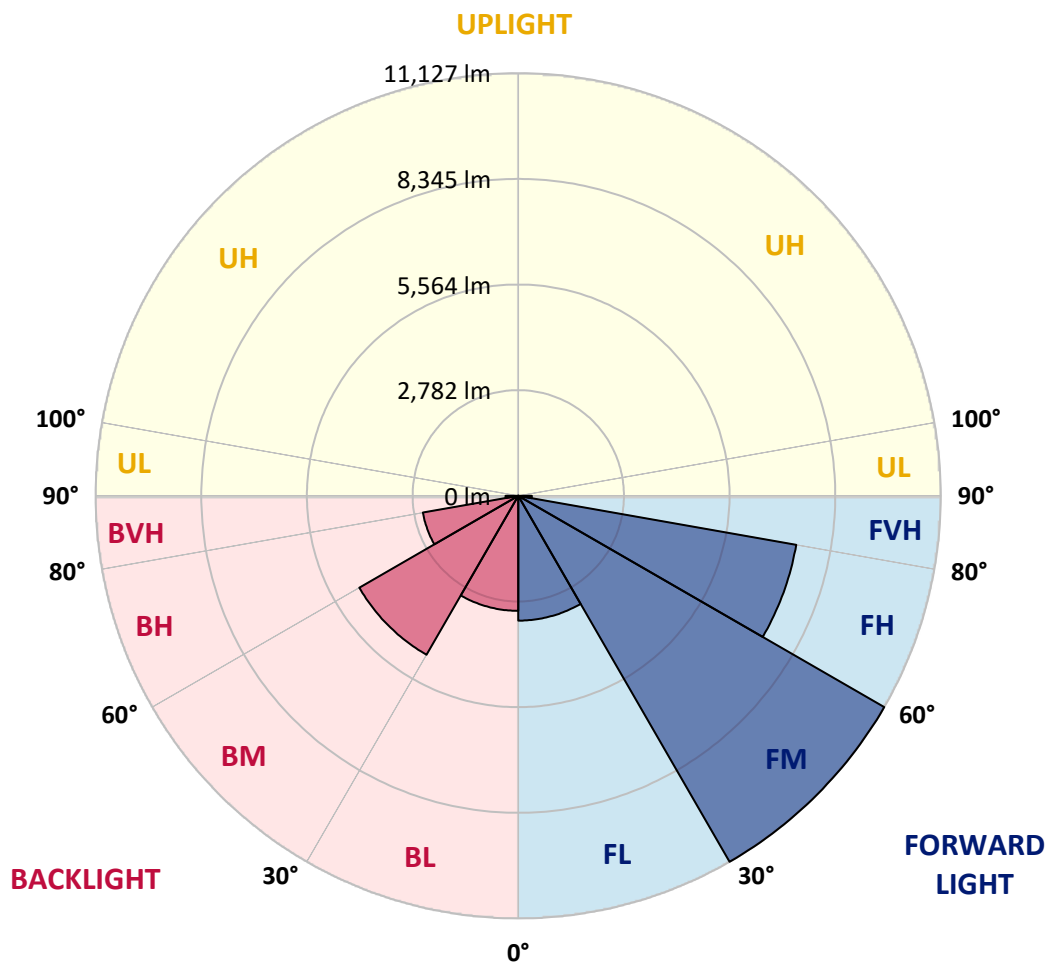


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3285.6	10.0			
FM (30°-60°)	11127.1	33.8			
FH (60°-80°)	7432.3	22.6			G3/7500
FVH (80°-90°)	358.5	1.1			G3/500
BL (0°-30°)	3029.0	9.2	B4/5000		
BM (30°-60°)	4832.5	14.7	B3/5000		
BH (60°-80°)	2550.0	7.7	B4/5000		G4/5000
BVH (80°-90°)	337.0	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-G4**  
 Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0
2.5°	6998.9	6956.3	6972.4	7031.3	6912.2	6990.1	6953.3	7032.7	7073.9	7056.3	7168.0
5°	7065.1	7018.0	7021.0	7062.1	6934.2	7000.4	6959.2	7044.5	7090.1	7065.1	7215.1
7.5°	7266.5	7215.1	7200.4	7197.4	7076.8	7126.8	7044.5	7113.6	7160.7	7147.4	7316.5
10°	7575.3	7513.5	7485.6	7469.4	7325.3	7310.6	7207.7	7238.6	7273.9	7288.6	7470.9
12.5°	7914.9	7831.1	7813.5	7765.0	7579.7	7547.4	7422.4	7437.1	7437.1	7470.9	7651.8
15°	8203.1	8134.0	8134.0	8084.0	7903.2	7857.6	7685.6	7667.9	7665.0	7691.5	7853.2
17.5°	8017.9	7979.6	7945.8	7920.8	7641.5	7567.9	8034.0	8003.2	7988.5	8014.9	8109.0
20°	7395.9	7498.8	7281.2	6973.9	7018.0	7903.2	8482.5	8426.6	8435.5	8461.9	8435.5
22.5°	6509.3	6254.9	6654.8	6765.1	6948.9	7603.2	8891.3	8950.1	8967.7	8969.2	8831.0
25°	5578.5	5719.7	6262.3	7103.3	7079.8	7625.3	8642.8	9479.4	9567.6	9558.8	9319.1
27.5°	5846.2	5819.7	6238.7	6791.6	7490.0	8092.9	8795.7	9167.7	9673.5	10233.7	9908.8
30°	6079.9	6057.9	6102.0	6875.4	7760.6	8560.4	9367.7	9307.4	9414.7	10429.3	10604.2
32.5°	6288.7	6272.6	6324.0	6409.3	7310.6	9064.8	9980.8	9969.0	10005.8	10085.2	11424.7
35°	6485.8	6487.2	6550.5	6690.1	7368.0	9169.2	10586.6	10711.6	10808.6	10983.6	11283.5
37.5°	6621.0	6624.0	6674.0	6843.1	7126.8	8653.1	11199.7	11645.3	11818.8	12133.4	11708.5
40°	6619.6	6641.6	6762.2	6982.7	7362.1	8311.9	11389.4	12703.9	12983.3	13212.7	12498.1
42.5°	6481.3	6493.1	6718.1	7116.5	7570.9	8570.7	10799.8	13736.1	14046.3	13983.1	13150.9
45°	6354.9	6352.0	6607.8	7098.9	7757.6	8926.6	10879.2	13706.7	14737.4	14661.0	13750.8
47.5°	6185.8	6190.2	6460.8	7022.4	7928.2	9307.4	11467.3	12464.2	13356.8	15243.2	14239.0
50°	5974.1	6000.5	6275.5	6906.3	8013.5	9663.2	11976.1	13009.7	13115.6	13690.5	14716.8
52.5°	5622.7	5575.6	6077.0	6772.5	8073.7	9922.0	12461.3	13533.2	13633.2	13424.4	15203.5
55°	3192.2	3961.1	5828.5	6616.6	8091.4	10077.8	12837.7	14128.7	14284.5	14087.5	15599.0
57.5°	2005.6	2067.3	5049.2	6203.4	7942.9	10174.9	13299.4	14946.2	15177.1	14708.0	15899.0
60°	710.2	766.1	2455.5	2848.1	6510.8	9907.3	14002.2	15909.3	15985.8	15291.7	16119.6
62.5°	75.0	98.5	1664.4	2090.9	5055.1	9142.7	14487.5	16684.2	16615.1	15724.0	16238.7
65°	26.5	36.8	1463.0	1870.3	4705.2	8904.5	14647.7	17015.0	17013.5	16000.5	16153.4
67.5°	20.6	27.9	1271.9	1624.7	4199.3	8394.3	14381.6	17263.5	17240.0	16273.9	15928.4
69°	20.6	29.4	1145.4	1464.5	3833.2	7906.1	14175.7	17394.4	17478.2	16278.4	15521.1
70°	20.6	29.4	1064.5	1352.7	3534.7	7459.1	13880.2	17294.4	17337.0	16137.2	15099.1
72.5°	20.6	29.4	824.9	1046.9	2687.8	5741.8	12159.9	15759.3	15840.2	14897.7	13570.0
75°	20.6	29.4	580.8	761.6	1764.4	3852.3	9682.3	13125.9	13345.0	12590.7	11118.9
77.5°	20.6	29.4	347.0	520.5	1107.2	2114.4	6662.2	10060.2	10555.7	9852.9	7947.3
80°	20.6	27.9	163.2	283.8	630.8	1120.4	3052.5	6193.2	6838.6	6163.7	4156.7
82.5°	20.6	27.9	133.8	204.4	319.1	557.3	1192.5	2029.1	1992.3	1789.4	1339.5
85°	19.1	25.0	110.3	150.0	229.4	352.9	664.6	826.3	788.1	697.0	701.4
87.5°	13.2	14.7	38.2	67.6	92.6	175.0	322.0	349.9	357.3	298.5	313.2
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°	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0	7143.0
2.5°	7220.9	7229.8	7272.4	7348.9	7347.4	7429.7	7407.7	7598.8	7606.2	7603.2	7617.9
5°	7287.1	7337.1	7431.2	7594.4	7688.5	7812.0	7788.5	7981.1	7992.9	7976.7	8017.9
7.5°	7401.8	7463.5	7617.9	7819.4	7844.4	8000.2	7967.9	8123.7	8116.4	8087.0	8157.6
10°	7563.5	7637.1	7776.7	7891.4	7963.5	8054.6	8019.3	8151.7	8126.7	8094.3	8162.0
12.5°	7728.2	7763.5	7841.4	7970.8	7976.7	7997.3	7956.1	8063.5	8035.5	7987.0	8057.6
15°	7885.5	7890.0	7876.7	7935.5	7873.8	7887.0	7797.3	7865.0	7816.4	7794.4	7840.0
17.5°	8089.9	8037.0	7942.9	7917.9	7772.3	7710.6	7578.2	7575.3	7490.0	7459.1	7490.0
20°	8335.5	8220.8	8003.2	7795.8	7544.4	7418.0	7193.0	7132.7	7063.6	6997.4	7034.2
22.5°	8675.1	8453.1	8078.2	7691.5	7275.3	7026.9	6750.4	6579.9	6450.5	6322.5	6360.8
25°	9061.8	8751.6	8184.0	7513.5	6953.3	6513.7	6154.9	5863.8	5678.5	5491.8	5575.6
27.5°	9585.3	9157.4	8248.7	7381.2	6534.3	5944.7	5372.7	4993.3	4800.7	4666.9	4624.3
30°	10195.5	9682.3	8364.9	7121.0	6041.7	5244.8	4518.4	4095.0	3890.6	3827.3	3853.8
32.5°	10939.5	10320.5	8601.6	6903.3	5541.8	4502.2	3655.3	3324.5	3177.4	3167.2	3164.2
35°	11934.9	11135.0	8804.5	6565.2	4880.1	3636.2	2908.4	2634.9	2629.0	2624.6	2634.9
37.5°	12699.5	11964.3	9020.7	6234.3	4095.0	2839.3	2326.1	2160.0	2142.3	2193.8	2207.0
40°	13302.3	12558.3	9344.1	5675.6	3174.5	2120.3	1786.5	1724.7	1849.7	1962.9	1986.5
42.5°	13846.4	13058.3	9414.7	5080.1	2312.9	1627.7	1480.7	1583.6	1776.2	1905.6	1930.6
45°	14356.6	13583.2	9145.6	4194.9	1654.2	1379.2	1408.6	1563.0	1779.1	1917.3	1932.1
47.5°	14913.9	13934.6	8854.5	3373.0	1360.1	1321.9	1393.9	1570.3	1796.8	1936.5	1943.8
50°	15281.5	14186.0	8126.7	2637.8	1274.8	1286.6	1388.0	1586.5	1799.7	1899.7	1905.6
52.5°	15431.4	14387.5	7468.0	2111.4	1232.2	1260.1	1395.4	1614.5	1792.4	1848.2	1845.3
55°	15525.5	14480.1	6901.9	1757.1	1193.9	1239.5	1408.6	1635.0	1808.5	1865.9	1865.9
57.5°	15465.2	14272.8	6481.3	1496.8	1155.7	1224.8	1424.8	1665.9	1961.5	2062.9	2052.6
60°	15421.1	13884.6	5884.4	1321.9	1110.1	1208.6	1445.4	1773.3	2287.9	2390.8	2357.0
62.5°	15193.2	13556.7	5237.4	1210.1	1058.7	1199.8	1463.0	1917.3	2333.5	2327.6	2261.4
65°	14612.4	12889.2	4217.0	1096.9	1005.7	1188.1	1468.9	1980.6	2146.7	2054.1	2035.0
67.5°	13789.0	11926.1	3327.4	983.7	946.9	1163.1	1517.4	1905.6	2042.3	1962.9	1933.5
69°	13250.9	11213.0	2764.3	913.1	908.7	1142.5	1536.5	1898.2	2004.1	1914.4	1876.2
70°	12817.1	10595.4	2386.4	867.5	879.3	1126.3	1517.4	1896.8	1987.9	1876.2	1833.5
72.5°	10955.7	8584.0	1540.9	758.7	792.5	1083.7	1445.4	1848.2	1954.1	1880.6	1821.8
75°	8489.9	6249.0	996.9	655.8	701.4	1011.6	1373.3	1817.4	1985.0	1851.2	1724.7
77.5°	5447.7	3343.6	771.9	551.4	602.8	910.2	1243.9	1692.4	1927.6	1807.1	1643.9
80°	2373.2	1241.0	595.5	447.0	488.2	739.6	1067.5	1504.2	1827.7	1814.4	1704.1
82.5°	1007.2	799.9	458.8	342.6	388.2	547.0	836.6	1289.5	1614.5	1677.7	1798.3
85°	570.5	479.3	305.8	235.3	288.2	402.9	595.5	989.6	1314.5	1457.1	1558.6
87.5°	245.6	200.0	141.2	126.5	163.2	208.8	255.8	464.6	701.4	855.7	920.4
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)