

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: P591399

Luminaire Tested: **CTN-CA10-310-740-U-T2-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591399  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-6)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-310-740-U-T2-SSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 4000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 26592 lumens  
Efficiency: N/A  
Efficacy: 85.1 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G3

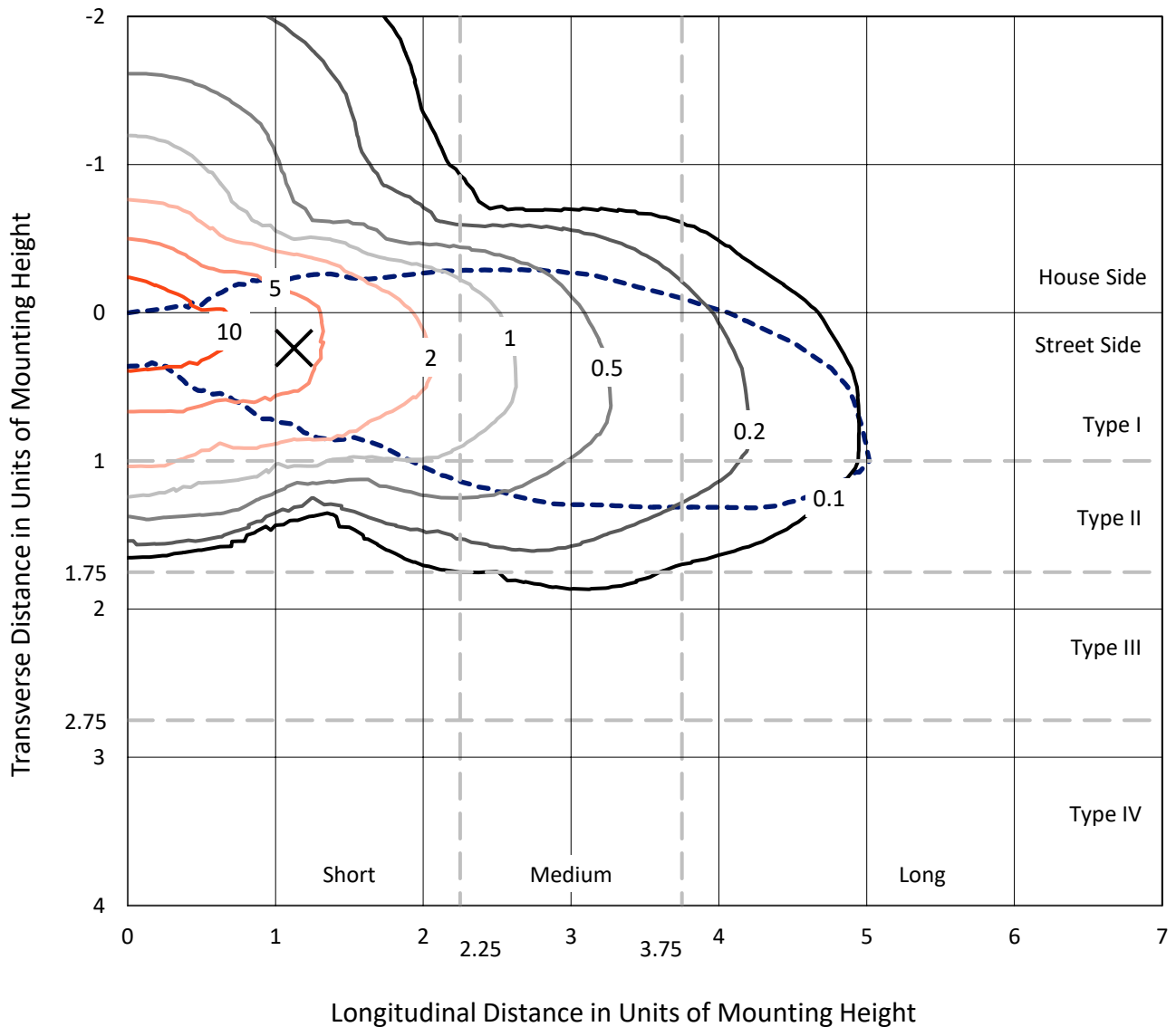
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

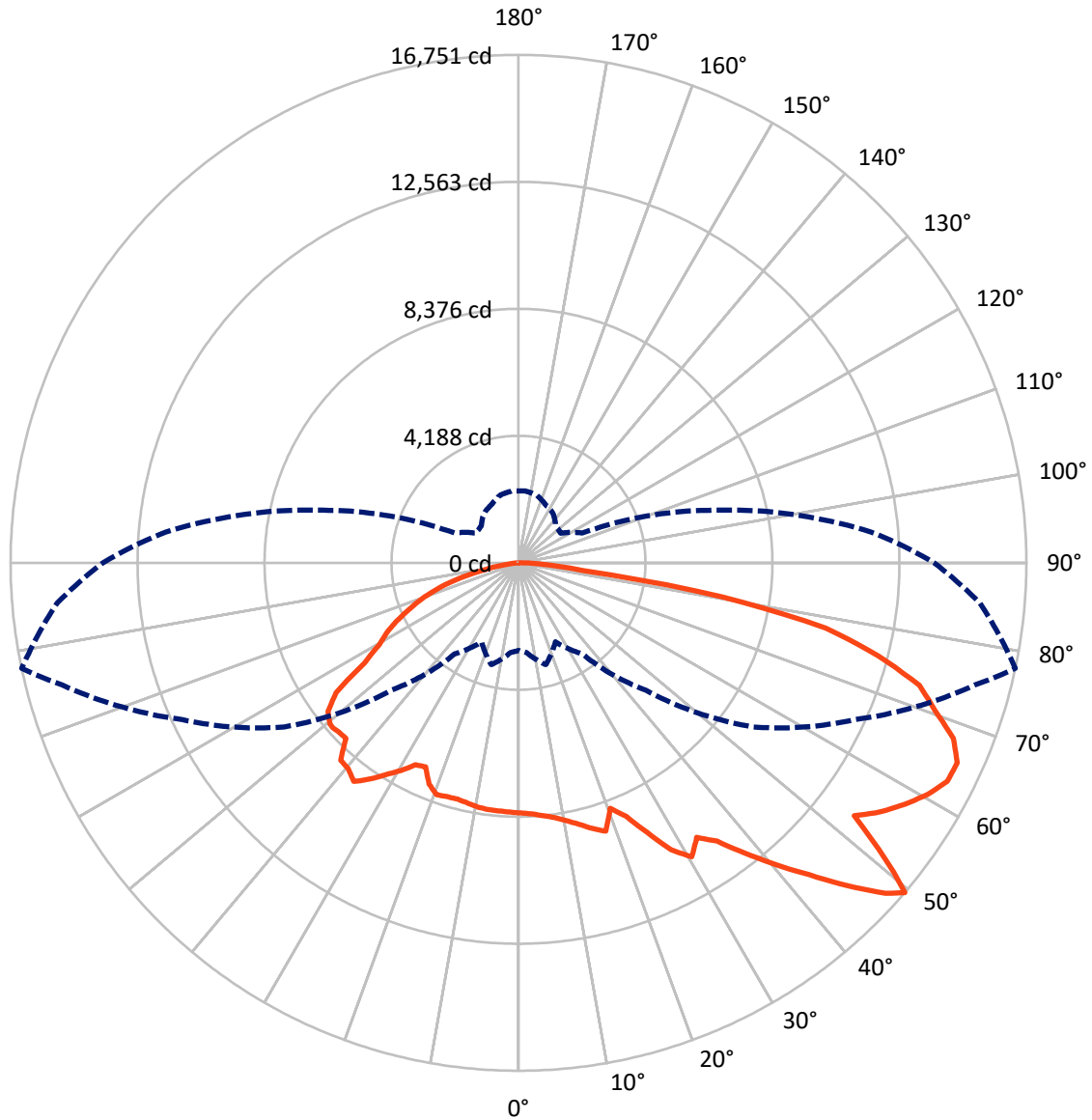
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.2 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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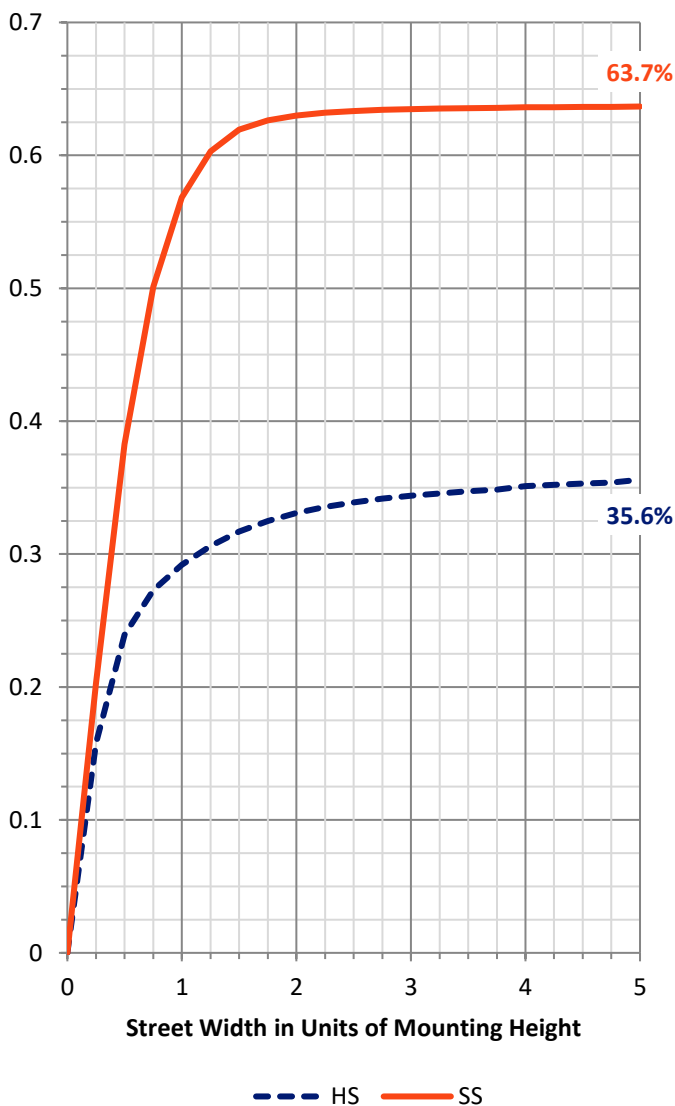
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9714.5	0.0	9714.5
	% Fixture	36.5	0.0	36.5
<b>Street Side</b>	Lumens	16877.5	0.0	16877.5
	% Fixture	63.5	0.0	63.5
<b>Total</b>	Lumens	26592.0	0.0	26592.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	799.2	3.0
10°-20°	2350.5	8.8
20°-30°	3309.4	12.4
30°-40°	4148.4	15.6
40°-50°	4682.4	17.6
50°-60°	4499.2	16.9
60°-70°	3675.5	13.8
70°-80°	2578.5	9.7
80°-90°	548.9	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°	26592.0	100.0
0°-180°	26592.0	100.0

**Coefficient of Utilization**



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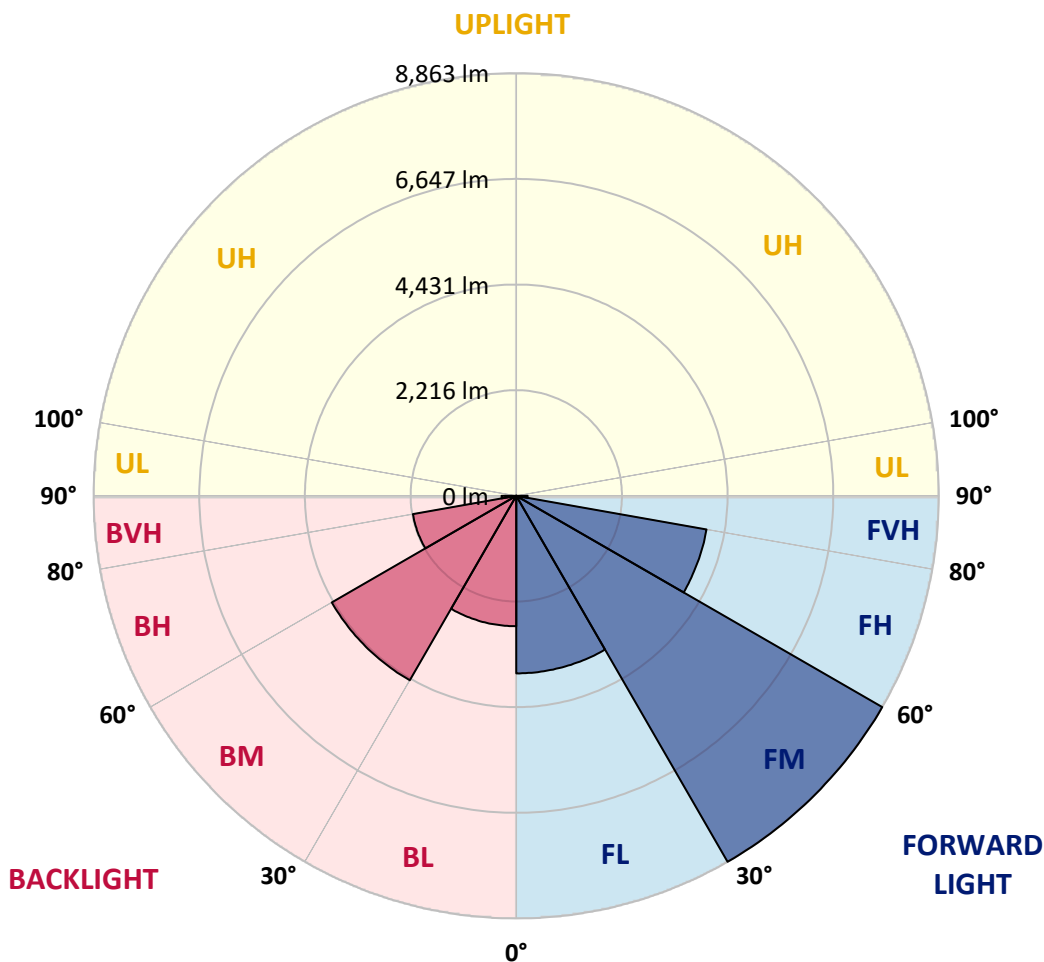
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3723.6	14.0			
FM (30°-60°)	8862.8	33.3			
FH (60°-80°)	4052.1	15.2			G2/5000
FVH (80°-90°)	239.0	0.9			G3/500
BL (0°-30°)	2735.4	10.3	B4/5000		
BM (30°-60°)	4467.2	16.8	B3/5000		
BH (60°-80°)	2201.9	8.3	B3/2500		G3/2500
BVH (80°-90°)	309.9	1.2			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2
2.5°	8588.1	8508.8	8526.7	8568.7	8406.9	8451.9	8380.0	8411.4	8326.1	8290.1	8305.1
5°	9200.6	9107.8	9128.7	9149.7	8911.6	8809.8	8609.1	8562.7	8432.4	8372.5	8365.0
7.5°	9492.6	9396.8	9419.3	9419.3	9238.1	9254.5	9050.9	8835.2	8574.7	8480.3	8438.4
10°	9961.3	9853.5	9837.1	9808.6	9572.0	9467.2	9298.0	9172.2	8776.8	8642.1	8526.7
12.5°	10304.3	10220.4	10221.9	10190.5	9923.9	9847.5	9549.5	9401.3	9010.4	8847.2	8661.5
15°	10446.5	10386.6	10425.6	10331.2	10153.0	10039.2	9898.5	9660.3	9256.0	9088.3	8859.2
17.5°	9783.1	9675.3	9389.3	9438.7	9426.7	9461.2	9323.4	9464.2	9399.8	9308.4	9157.2
20°	8284.2	8398.0	8598.6	8420.4	8406.9	8854.7	9175.2	9131.7	8772.3	8639.1	8790.3
22.5°	7039.7	6900.5	7324.3	7957.7	8135.9	8592.6	9137.7	9655.9	9250.0	9079.3	8621.1
25°	5922.6	6063.4	6722.3	7680.7	8240.7	8375.5	9000.0	9974.8	10039.2	9853.5	9259.0
27.5°	5745.9	5744.4	6189.2	7117.6	8392.0	8814.3	9005.9	9816.1	10837.4	10710.1	10027.2
30°	5705.5	5684.5	5853.7	6794.1	7980.2	9208.1	9581.0	9865.5	10831.4	11256.7	10904.8
32.5°	5531.8	5515.3	5689.0	6130.8	7420.1	9584.0	10132.1	10506.4	10561.8	10794.0	11795.8
35°	5253.2	5292.2	5519.8	6008.0	6960.4	8844.2	10690.6	11276.1	11409.4	11273.2	11280.6
37.5°	4986.7	5016.6	5250.2	5789.3	6624.9	7194.0	11074.0	12015.9	12312.4	12156.7	11428.9
40°	4640.7	4682.7	4959.7	5557.2	6404.8	6208.6	10518.4	12884.5	13296.3	13097.1	12272.0
42.5°	4251.4	4270.9	4598.8	5175.3	4592.8	6241.6	9732.2	13681.1	14257.7	14060.0	13064.2
45°	3918.9	3930.9	4199.0	4565.9	4140.6	6189.2	9188.6	13303.8	15380.8	15183.1	13902.8
47.5°	3451.7	3537.1	3827.6	3156.7	3845.6	6060.4	9371.3	11797.3	16433.5	16286.8	14717.4
49°	2891.7	2968.0	3478.7	2875.2	3662.9	5945.1	9434.2	12237.5	15580.0	16751.0	15276.0
50°	2658.1	2713.5	2665.5	2774.9	3529.6	5828.3	9333.9	12592.4	14319.1	16042.7	15635.4
52.5°	2310.6	2150.4	1831.4	2491.8	3222.6	5373.0	7691.1	13546.4	14187.3	13863.8	14650.0
55°	976.4	1391.2	1620.3	2044.1	2912.6	3261.5	7122.1	14585.6	14823.7	14497.3	13164.5
57.5°	763.7	778.7	891.0	1521.5	1611.3	2526.3	6890.0	15031.9	15304.4	15021.4	13675.1
60°	112.3	110.8	146.8	175.2	399.8	1162.1	4503.0	10699.6	14771.3	15509.6	14142.4
62.5°	40.4	41.9	41.9	49.4	73.4	509.1	3273.5	9982.3	15127.7	15867.5	14533.2
65°	3.0	4.5	7.5	16.5	38.9	480.7	2903.6	10159.0	15012.4	15901.9	14723.4
67.5°	0.0	1.5	4.5	12.0	31.4	473.2	2700.0	9861.0	14528.7	15464.6	14307.1
70°	0.0	0.0	3.0	10.5	28.5	455.2	2345.1	8850.2	13663.2	14567.6	13549.3
72.5°	0.0	0.0	3.0	10.5	25.5	434.3	1927.3	7791.5	12875.5	13821.9	12450.2
75°	0.0	0.0	3.0	9.0	22.5	395.3	1409.1	5647.1	11533.7	12257.0	10889.8
77.5°	0.0	0.0	3.0	9.0	21.0	341.4	952.4	3236.1	9489.6	10364.2	9149.7
80°	0.0	0.0	3.0	7.5	19.5	259.1	539.1	1615.8	4959.7	6812.1	6539.6
82.5°	0.0	0.0	3.0	7.5	15.0	137.8	251.6	705.3	1828.4	2157.9	2518.8
85°	0.0	0.0	3.0	6.0	12.0	34.4	85.4	335.4	998.8	1109.6	1082.7
87.5°	0.0	0.0	3.0	6.0	9.0	13.5	28.5	95.8	369.9	413.3	353.4
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°	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2	8248.2
2.5°	8302.1	8255.7	8212.3	8218.3	8114.9	8092.5	7995.1	8055.0	8014.6	7963.7	7996.6
5°	8320.1	8260.2	8183.8	8098.5	7872.3	7791.5	7656.7	7695.6	7641.7	7581.8	7613.3
7.5°	8359.0	8288.6	8162.9	7941.2	7677.7	7535.4	7379.7	7512.9	7496.5	7462.0	7496.5
10°	8375.5	8314.1	8100.0	7842.4	7477.0	7379.7	7261.4	7238.9	7243.4	7250.9	7301.8
12.5°	8418.9	8327.6	7998.1	7692.6	7360.2	7167.0	7050.2	7119.1	6976.8	6913.9	6940.9
15°	8525.2	8351.5	7918.8	7484.5	7153.5	7000.8	6713.3	6713.3	6677.3	6615.9	6633.9
17.5°	8739.4	8447.4	7897.8	7346.7	6922.9	6659.4	6395.8	6256.5	6217.6	6237.1	6249.1
20°	8854.7	8624.1	7887.3	7165.5	6663.9	6358.4	5958.5	5859.7	5729.4	5747.4	5768.4
22.5°	8161.4	7860.4	7870.8	6943.9	6343.4	5955.5	5518.3	5346.1	5266.7	5251.7	5292.2
25°	8655.5	8049.0	7113.1	6822.6	5991.5	5497.3	5054.1	4817.4	4696.1	4688.7	4714.1
27.5°	9311.4	8568.7	7008.3	6253.5	5617.1	4941.7	4452.1	4282.8	4163.0	4157.1	4161.5
30°	10075.2	9262.0	7268.8	5552.7	5109.5	4300.8	3911.5	3791.7	3682.3	3634.4	3635.9
32.5°	10924.2	9889.5	7520.4	5417.9	4095.7	3742.2	3439.7	3346.9	3197.2	3128.3	3108.8
35°	11719.4	10555.9	7834.9	5191.8	3553.6	3245.1	3032.4	2908.1	2791.3	2732.9	2713.5
37.5°	11018.6	11169.8	8113.4	5006.1	3140.3	2689.5	2631.1	2548.7	2488.8	2443.9	2436.4
40°	11178.8	10061.7	8278.2	4655.7	2713.5	2349.6	2255.2	2295.7	2357.1	2319.6	2318.1
42.5°	11713.4	10233.9	8128.4	4170.5	2375.0	2026.1	2053.1	2204.3	2333.1	2309.1	2312.1
45°	12478.6	10771.5	6975.3	3591.0	2047.1	1825.4	2000.7	2177.4	2339.1	2346.6	2346.6
47.5°	13270.8	11376.5	6761.2	2818.3	1806.0	1747.6	1991.7	2144.4	2330.1	2378.0	2372.0
49°	13709.6	11670.0	6701.3	2319.6	1698.2	1731.1	1990.2	2113.0	2312.1	2379.5	2372.0
50°	13965.7	11870.7	6589.0	2120.5	1635.3	1728.1	1991.7	2093.5	2294.2	2369.0	2366.0
52.5°	14503.3	12125.2	6196.6	1746.1	1482.5	1717.6	2015.6	2075.5	2238.8	2318.1	2348.1
55°	11984.5	11695.4	5537.7	1567.9	1413.6	1696.7	2015.6	2086.0	2190.8	2237.3	2265.7
57.5°	12132.7	10000.3	4354.7	1479.5	1367.2	1674.2	1984.2	2084.5	2165.4	2172.9	2163.9
60°	12585.0	10232.4	3246.6	1389.7	1313.3	1645.7	1916.8	2036.6	2098.0	2098.0	2071.0
62.5°	12856.0	10341.7	2596.7	1290.8	1256.4	1587.3	1816.5	1943.8	1990.2	1964.7	1960.2
65°	12923.4	10430.1	1883.9	1184.5	1192.0	1524.5	1713.1	1824.0	1888.3	1844.9	1853.9
67.5°	12691.3	9799.6	1376.2	1075.2	1118.6	1439.1	1611.3	1710.1	1756.6	1734.1	1738.6
70°	11833.2	9113.8	968.9	888.0	1000.3	1307.3	1482.5	1596.3	1620.3	1581.4	1587.3
72.5°	10454.0	8055.0	611.0	694.8	880.5	1186.0	1331.3	1403.2	1407.6	1455.6	1481.0
75°	9104.8	6463.2	441.8	548.1	699.3	1013.8	1216.0	1283.4	1332.8	1572.4	1611.3
77.5°	7297.3	4089.7	375.9	432.8	549.6	841.6	1084.2	1187.5	1632.3	1750.6	1720.6
80°	4422.1	2539.8	283.0	341.4	458.2	646.9	928.4	1223.5	1651.7	1540.9	1478.0
82.5°	2041.1	1103.7	191.7	278.5	363.9	482.2	732.3	1428.6	1415.1	1180.0	1168.0
85°	733.8	326.5	104.8	199.2	254.6	332.4	563.1	1415.1	1109.6	991.3	928.4
87.5°	187.2	58.4	43.4	97.3	128.8	176.7	307.0	748.7	576.5	507.7	489.7
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)