

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: P232699

Luminaire Tested: **CTN-10-4-D-E1-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232699  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-19)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-10-4-D-E1-T3  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 43092 lumens  
Efficiency: N/A  
Efficacy: 139.9 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B4 - U0 - G5

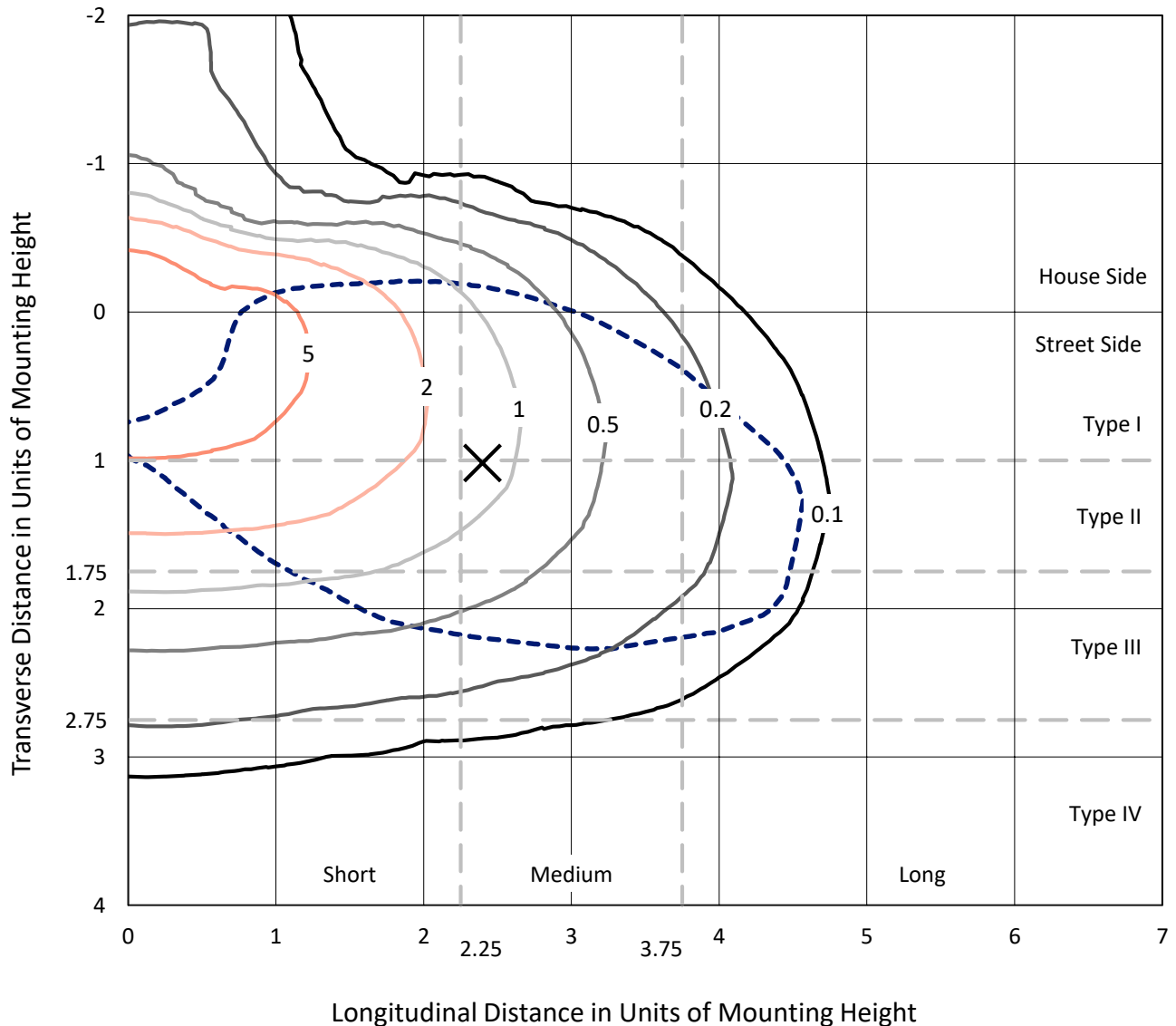
Input Watts (W): 308  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P232699  
 CATALOG NUMBER: CTN-10-4-D-E1-T3

### Iso-Footcandle Lines of Horizontal Illumination

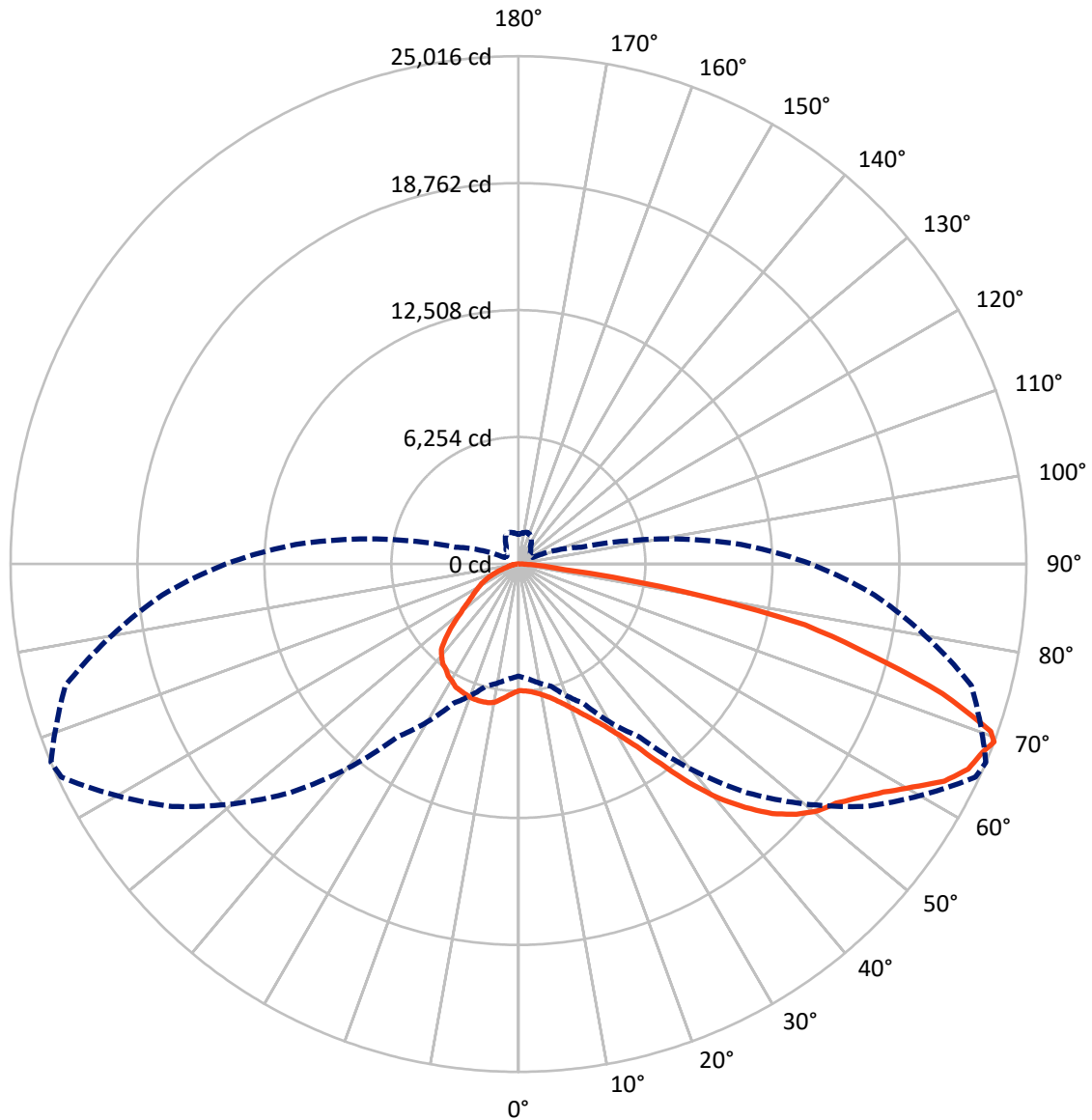
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.2 fc  
 Type III - Medium - Semi-Cutoff

REPORT NUMBER: P232699  
CATALOG NUMBER: CTN-10-4-D-E1-T3

### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P232699

CATALOG NUMBER: CTN-10-4-D-E1-T3

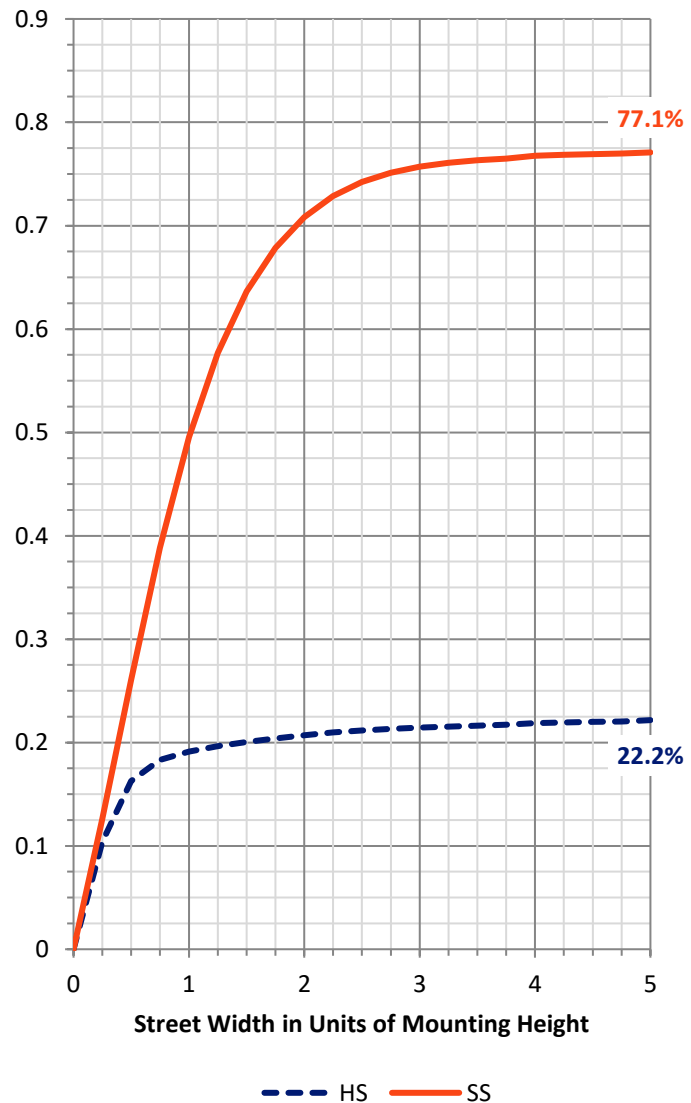
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9802.5	0.0	9802.5
	% Fixture	22.7	0.0	22.7
<b>Street Side</b>	Lumens	33289.5	0.0	33289.5
	% Fixture	77.3	0.0	77.3
<b>Total</b>	Lumens	43092.0	0.0	43092.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	633.0	1.5
10°-20°	2033.1	4.7
20°-30°	3535.6	8.2
30°-40°	5325.9	12.4
40°-50°	7355.6	17.1
50°-60°	8779.0	20.4
60°-70°	9245.9	21.5
70°-80°	5423.7	12.6
80°-90°	760.1	1.8
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°	43092.0	100.0
0°-180°	43092.0	100.0



REPORT NUMBER: P232699

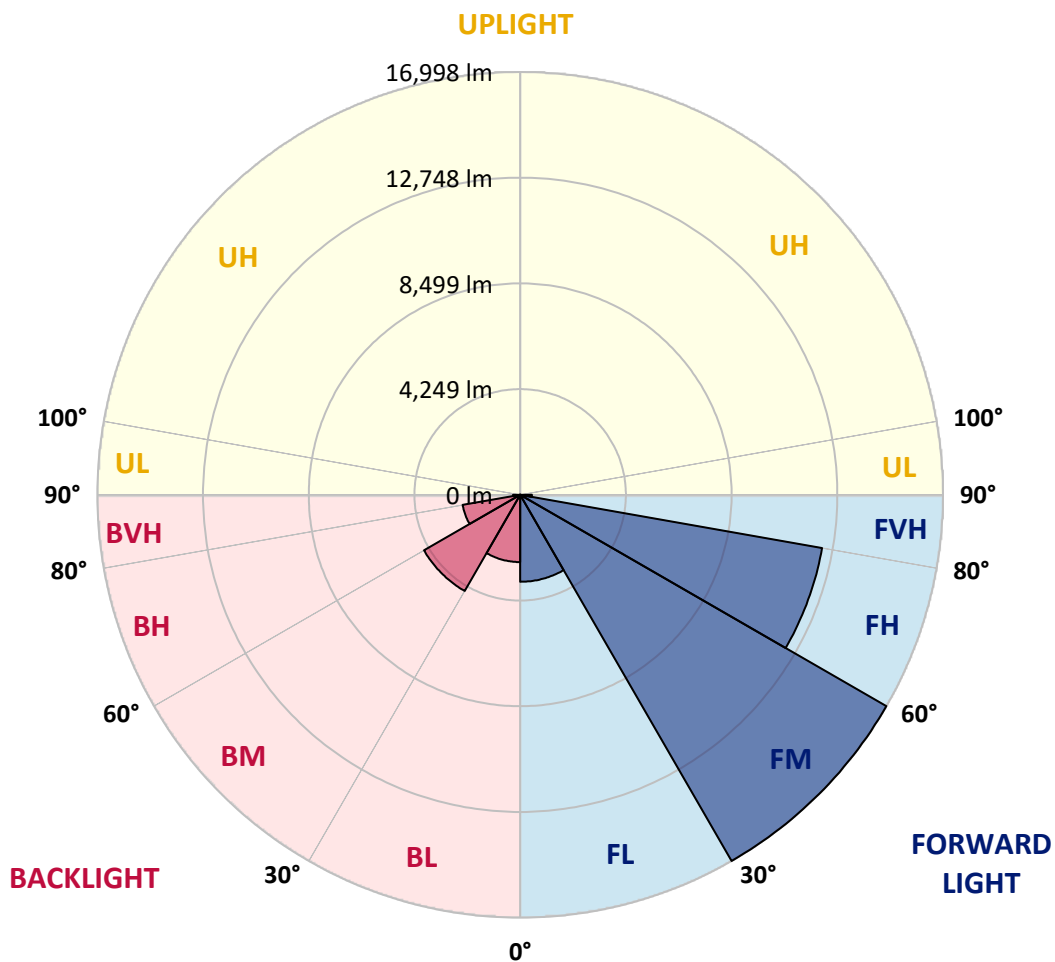
CATALOG NUMBER: CTN-10-4-D-E1-T3

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3496.9	8.1			
FM	(30°-60°)	16997.8	39.4			
FH	(60°-80°)	12322.4	28.6			G5
FVH	(80°-90°)	472.4	1.1			G3/500
BL	(0°-30°)	2704.9	6.3	B4/5000		
BM	(30°-60°)	4462.8	10.4	B3/5000		
BH	(60°-80°)	2347.1	5.4	B3/2500		G3/2500
BVH	(80°-90°)	287.7	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G5**

Type III Medium





REPORT NUMBER: P232699

CATALOG NUMBER: CTN-10-4-D-E1-T3

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0
2.5°	6262.2	6270.5	6262.2	6248.4	6202.9	6223.6	6205.7	6263.6	6259.5	6237.4	6277.4
5°	6408.4	6418.1	6400.2	6389.1	6318.8	6328.4	6289.8	6321.5	6310.5	6273.3	6335.3
7.5°	6647.1	6656.7	6634.7	6619.5	6520.2	6498.1	6427.8	6437.4	6416.7	6357.4	6429.1
10°	6968.5	6976.7	6939.5	6902.3	6775.4	6721.6	6604.3	6585.0	6554.7	6496.7	6569.8
12.5°	7314.7	7327.1	7281.6	7233.3	7085.7	6997.4	6830.5	6771.2	6734.0	6663.6	6743.6
15°	7685.7	7700.9	7654.0	7598.8	7436.1	7299.5	7091.2	7001.6	6965.7	6877.4	6927.1
17.5°	8172.6	8168.5	8129.9	8054.0	7859.5	7659.5	7403.0	7269.2	7244.3	7158.8	7171.2
20°	8736.8	8717.5	8681.6	8576.8	8365.7	8117.5	7782.3	7612.6	7587.8	7516.1	7440.2
22.5°	9349.2	9329.9	9295.4	9161.6	8953.3	8627.8	8226.4	8026.4	7993.3	7903.7	7776.8
25°	9952.0	9931.3	9912.0	9785.1	9582.3	9212.7	8729.9	8474.7	8459.5	8368.5	8135.4
27.5°	10578.2	10565.8	10571.3	10462.4	10259.6	9876.1	9328.5	9051.3	9025.1	8909.2	8592.0
30°	11222.4	11225.1	11277.5	11161.7	10975.5	10589.3	10045.8	9763.0	9767.2	9663.7	9200.2
32.5°	11798.9	11801.7	11918.9	11861.0	11758.9	11374.1	10874.8	10676.1	10716.2	10707.9	10233.4
35°	12215.5	12233.4	12495.5	12574.1	12535.5	12200.3	11899.6	11947.9	12074.8	12433.4	11935.5
37.5°	12607.2	12614.1	12949.3	13131.4	13274.8	13073.5	13012.8	13470.7	13670.7	14167.3	13430.7
40°	12720.3	12815.5	13239.0	13492.8	13826.6	13925.9	14233.5	14910.7	15146.6	15445.9	14437.6
42.5°	12616.9	12752.1	13283.1	13885.9	14349.4	14841.8	15405.9	16172.8	16386.6	16571.5	15401.8
45°	12400.3	12503.8	13055.5	13957.6	14797.6	15774.2	16425.3	17343.9	17537.0	17417.0	16154.9
47.5°	12112.1	12190.7	12805.9	13843.1	15156.3	16610.1	17359.1	18283.3	18423.9	18143.9	16666.7
50°	11712.0	11805.8	12492.8	13685.9	15419.7	17309.4	18109.5	18989.5	19108.1	18596.4	17168.7
52.5°	11218.2	11335.5	12134.1	13418.3	15617.0	17830.8	18633.6	19459.8	19579.8	19247.4	17566.0
55°	10658.2	10821.0	11643.1	13092.8	15630.8	18108.1	18960.5	20149.5	20320.5	19961.9	17913.6
57.5°	10089.9	10194.8	11065.1	12594.8	15371.4	18200.5	19352.2	20952.3	21202.0	20654.4	18292.9
60°	9396.1	9496.8	10358.9	11928.6	14854.2	18342.6	20135.7	22101.3	22299.9	21461.3	18615.7
62.5°	8575.4	8689.9	9472.0	11016.8	14088.7	18400.5	20934.4	23323.4	23551.0	22195.1	18801.9
65°	7532.6	7659.5	8372.6	9913.4	12994.8	17989.5	21279.2	24226.9	24344.1	22757.9	18721.9
67.5°	6393.3	6498.1	7066.4	8540.9	11481.7	16917.7	21098.5	24560.7	24679.3	23139.9	18243.3
69°	5521.5	5682.9	6229.1	7563.0	10393.4	15937.0	20822.6	24835.2	25015.8	23097.2	17614.3
70°	4823.6	5004.3	5498.1	6700.9	9469.2	14919.0	20309.5	24626.9	24677.9	22684.7	17047.4
72.5°	3048.4	3107.7	3332.5	4132.5	6662.2	11597.6	17772.9	21862.7	21848.9	20239.2	14881.8
75°	1506.2	1583.5	2009.7	2320.1	3282.8	7459.5	13989.3	17956.3	17959.1	17081.8	12234.8
77.5°	904.9	938.0	1046.9	1495.2	1875.9	3347.7	9495.4	14215.6	14433.5	13902.4	8804.4
80°	623.5	606.9	638.6	735.2	1009.7	1760.0	3903.6	8036.1	8271.9	7629.2	3750.4
82.5°	491.0	477.3	486.9	511.7	481.4	815.2	1651.1	2402.8	2332.5	2056.6	1441.4
85°	343.5	315.9	333.8	324.1	286.9	478.6	802.8	998.6	991.8	1024.9	784.8
87.5°	109.0	96.6	99.3	96.6	80.0	169.7	288.3	389.0	358.6	364.1	275.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P232699

CATALOG NUMBER: CTN-10-4-D-E1-T3

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0	6236.0
2.5°	6287.1	6276.0	6288.4	6353.3	6338.1	6394.7	6408.4	6500.9	6505.0	6496.7	6538.1
5°	6364.3	6375.3	6422.2	6525.7	6560.2	6681.6	6736.7	6849.8	6860.9	6865.0	6905.0
7.5°	6476.0	6495.3	6596.0	6731.2	6796.0	6954.7	7037.4	7176.7	7186.4	7201.6	7247.1
10°	6641.6	6669.1	6749.1	6934.0	6954.7	7080.2	7156.1	7276.1	7267.8	7288.5	7329.9
12.5°	6808.5	6823.6	6884.3	7011.2	6997.4	7120.2	7153.3	7231.9	7226.4	7225.0	7255.4
15°	6987.8	6961.6	6969.8	7018.1	6967.1	7042.9	7019.5	7077.4	7001.6	6971.2	6991.9
17.5°	7178.1	7114.7	7033.3	6997.4	6900.9	6888.5	6808.5	6780.9	6728.5	6711.9	6728.5
20°	7404.3	7269.2	7071.9	6968.5	6757.4	6648.5	6495.3	6405.7	6284.3	6294.0	6317.4
22.5°	7634.7	7444.3	7146.4	6869.2	6571.2	6350.5	6045.7	5964.3	5805.7	5758.8	5805.7
25°	7917.5	7662.3	7183.6	6780.9	6289.8	5896.7	5587.7	5299.5	5179.5	5062.2	5106.3
27.5°	8288.5	7943.7	7318.8	6671.9	5971.2	5447.0	4956.0	4583.6	4434.6	4309.1	4317.4
30°	8769.9	8320.2	7369.9	6442.9	5587.7	4830.5	4212.5	3798.7	3612.5	3561.5	3539.4
32.5°	9659.6	8927.1	7460.9	6276.0	5110.5	4160.1	3401.5	2957.3	2840.1	2862.1	2933.9
35°	11236.2	10197.5	7736.8	5927.1	4583.6	3429.1	2642.8	2299.4	2318.7	2358.7	2350.4
37.5°	12596.2	11343.8	8196.1	5681.5	3939.4	2597.3	1995.9	1813.8	1929.7	2008.3	2005.6
40°	13520.4	12179.6	8797.5	5222.2	3125.6	1851.1	1469.0	1368.3	1515.9	1684.2	1713.1
42.5°	14437.6	12939.7	9088.5	4815.3	2194.5	1306.2	1063.5	1089.7	1278.7	1437.3	1466.2
45°	15097.0	13491.4	9216.8	4089.8	1401.4	1000.0	928.3	1024.9	1229.0	1354.5	1368.3
47.5°	15581.1	13906.6	9077.5	3309.1	1031.8	914.5	915.9	1038.6	1244.2	1386.2	1391.8
50°	16008.7	14199.0	8516.1	2580.8	928.3	885.5	933.8	1078.6	1288.3	1431.8	1427.6
52.5°	16301.1	14284.5	7834.7	2114.5	899.3	869.0	949.0	1115.9	1302.1	1398.7	1390.4
55°	16495.6	14156.2	7310.5	1740.7	874.5	867.6	973.8	1162.8	1315.9	1354.5	1335.2
57.5°	16615.6	13896.9	6867.8	1496.6	853.8	867.6	1001.4	1180.7	1366.9	1437.3	1415.2
60°	16579.8	13781.1	6267.8	1296.6	824.8	870.4	1016.6	1206.9	1572.5	1738.0	1742.1
62.5°	16508.0	13554.8	5681.5	1138.0	790.4	886.9	1035.9	1358.7	1931.1	1932.5	1863.5
65°	16167.3	12873.5	4829.1	994.5	754.5	891.1	1040.0	1608.3	2165.6	1983.5	1893.8
67.5°	15229.4	11876.2	3831.8	860.7	714.5	866.2	1035.9	1573.8	1749.0	1565.6	1520.0
69°	14411.4	11011.3	3201.5	780.7	685.5	841.4	1040.0	1509.0	1619.4	1510.4	1469.0
70°	13815.5	10310.6	2720.1	732.4	659.3	829.0	1040.0	1485.6	1601.4	1498.0	1458.0
72.5°	11858.3	8099.5	1630.4	611.1	583.5	780.7	1030.4	1449.7	1615.2	1526.9	1474.5
75°	9084.4	5891.2	949.0	502.1	491.0	700.7	979.3	1427.6	1662.1	1528.3	1413.8
77.5°	5820.8	2718.7	707.6	408.3	398.6	606.9	914.5	1355.9	1707.6	1602.8	1458.0
80°	2022.1	1233.1	528.3	322.8	309.0	496.6	801.4	1222.1	1626.3	1637.3	1528.3
82.5°	1109.0	812.4	373.8	240.0	227.6	311.7	623.5	1053.8	1504.9	1620.7	1629.0
85°	609.7	457.9	245.5	154.5	173.8	267.6	431.7	819.3	1211.1	1408.3	1470.4
87.5°	246.9	165.5	96.6	60.7	71.7	106.2	146.2	419.3	731.1	943.5	1038.6
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)