

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: P591352

Luminaire Tested: **CTN-CA8-230-730-U-T2-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591352  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-230-730-U-T2-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (8) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 25574 lumens  
Efficiency: N/A  
Efficacy: 112.0 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

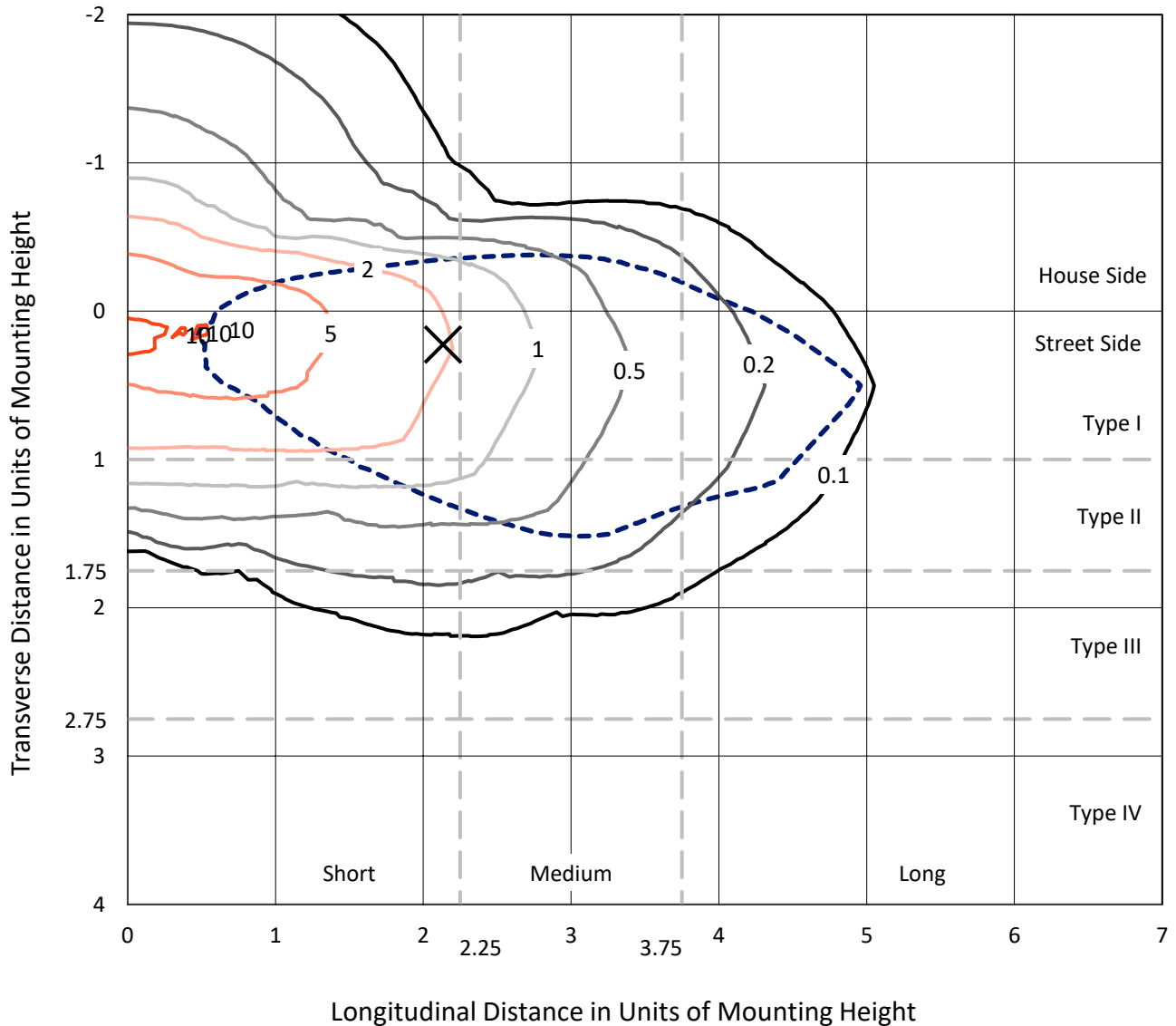
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P591352  
 CATALOG NUMBER: CTN-CA8-230-730-U-T2-SSS-HM-EX90

### Iso-Footcandle Lines of Horizontal Illumination

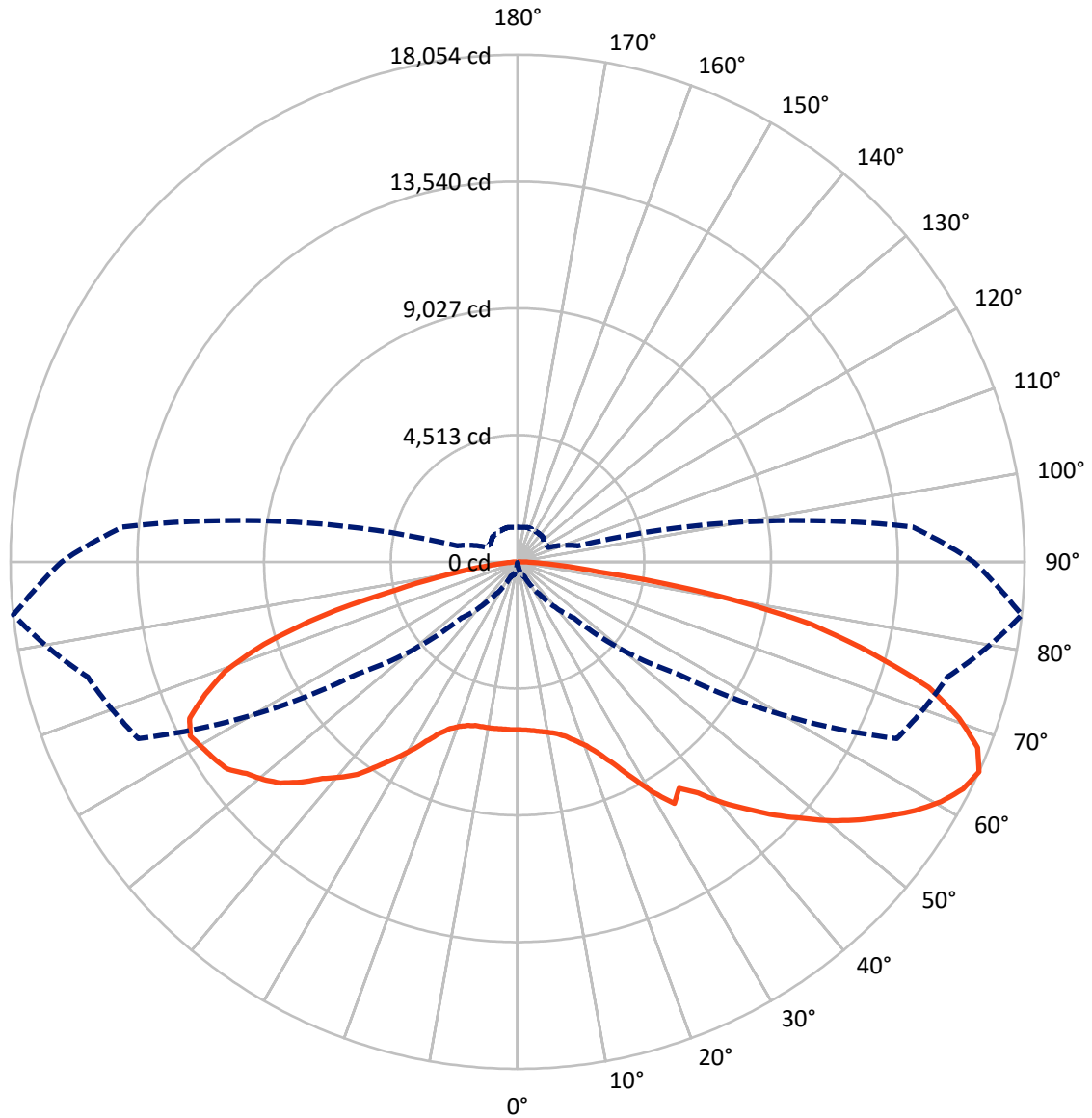
✕ Max cd  
 - - - 1/2 Max cd



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

REPORT NUMBER: P591352  
CATALOG NUMBER: CTN-CA8-230-730-U-T2-SSS-HM-EX90

### Luminous Intensity Polar Plot



— Vertical Plane Through 84-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P591352  
 CATALOG NUMBER: CTN-CA8-230-730-U-T2-SSS-HM-EX90

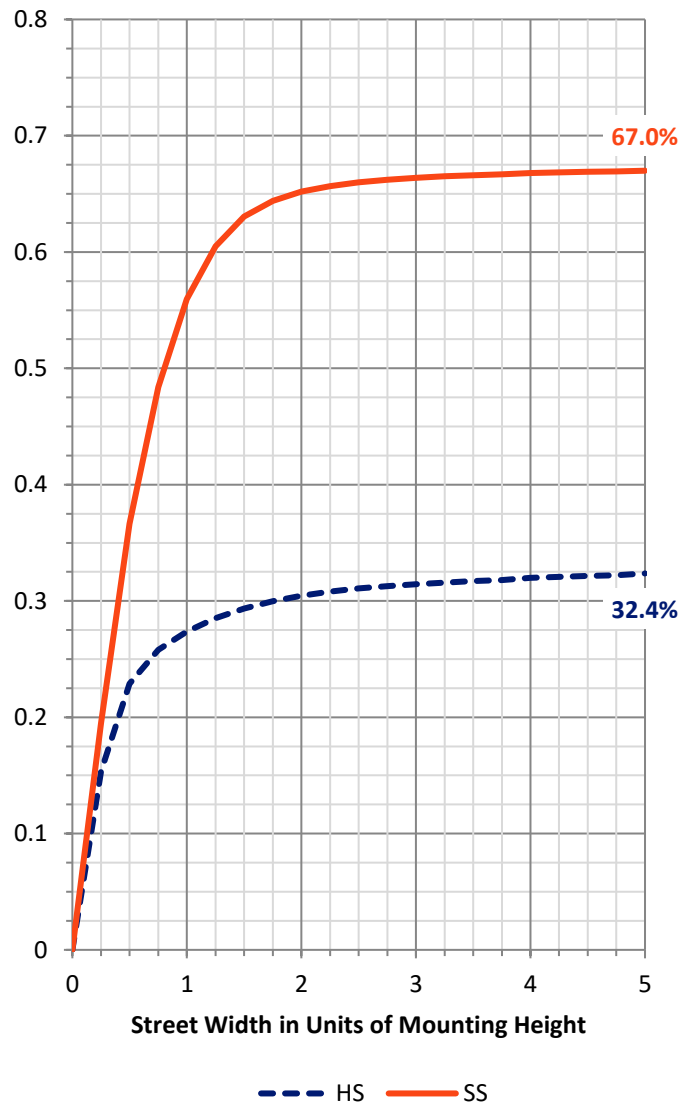
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8466.3	0.0	8466.3
	% Fixture	33.1	0.0	33.1
<b>Street Side</b>	Lumens	17107.7	0.0	17107.7
	% Fixture	66.9	0.0	66.9
<b>Total</b>	Lumens	25574.0	0.0	25574.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	577.1	2.3
10°-20°	1717.9	6.7
20°-30°	2581.1	10.1
30°-40°	3432.4	13.4
40°-50°	4238.0	16.6
50°-60°	4762.3	18.6
60°-70°	4670.7	18.3
70°-80°	3037.1	11.9
80°-90°	557.4	2.2
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°	25574.0	100.0
0°-180°	25574.0	100.0

**Coefficient of Utilization**



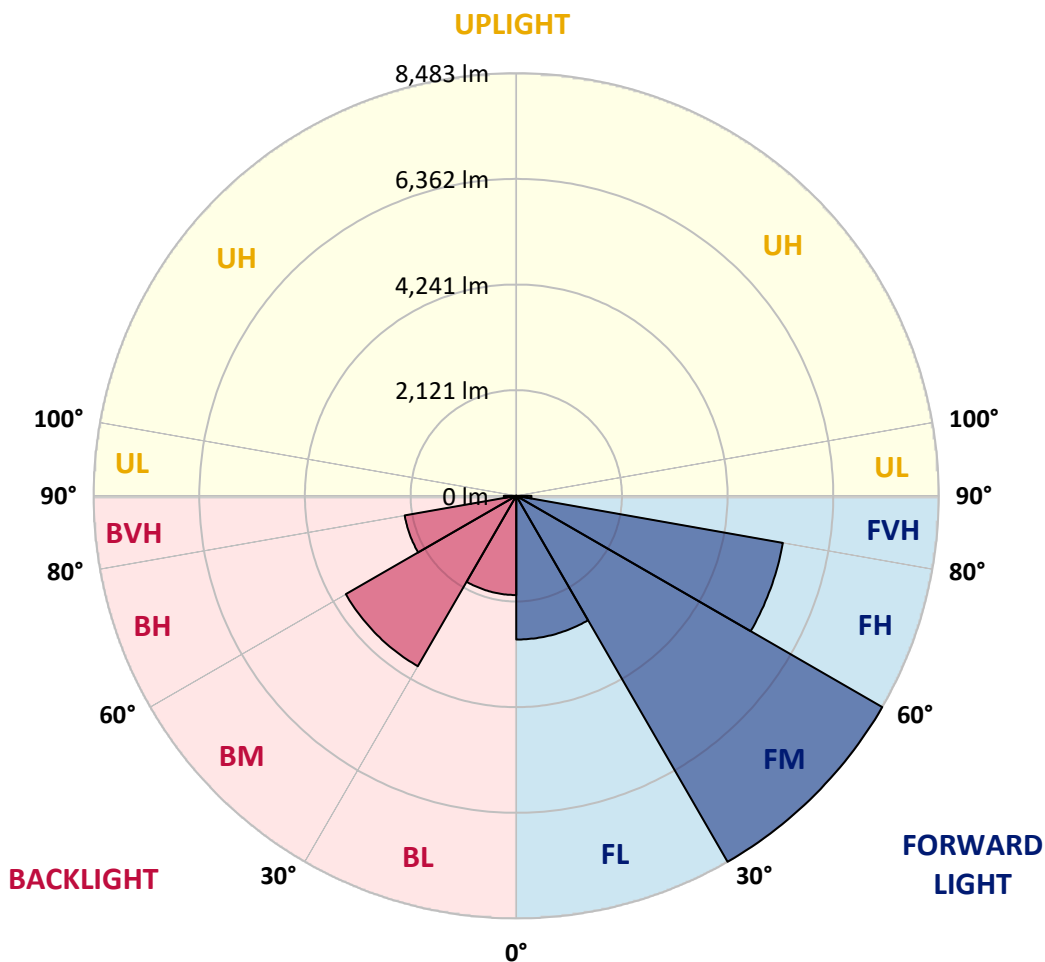
REPORT NUMBER: P591352  
 CATALOG NUMBER: CTN-CA8-230-730-U-T2-SSS-HM-EX90

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2884.6	11.3			
FM (30°-60°)	8482.8	33.2			
FH (60°-80°)	5434.1	21.2			G3/7500
FVH (80°-90°)	306.2	1.2			G3/500
BL (0°-30°)	1991.6	7.8	B3/2500		
BM (30°-60°)	3949.8	15.4	B3/5000		
BH (60°-80°)	2273.7	8.9	B3/2500		G3/2500
BVH (80°-90°)	251.2	1.0			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Short





REPORT NUMBER: P591352

CATALOG NUMBER: CTN-CA8-230-730-U-T2-SSS-HM-EX90

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	84°	85°
0°	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4
2.5°	6235.2	6176.4	6182.9	6211.2	6102.4	6138.3	6077.4	6088.3	6015.4	6002.4	6010.0
5°	6673.5	6610.4	6610.4	6627.8	6445.1	6396.1	6226.5	6198.2	6090.5	6042.6	6044.8
7.5°	6899.8	6837.8	6825.8	6842.1	6710.5	6721.4	6547.3	6380.9	6189.5	6104.6	6100.3
10°	7232.7	7163.0	7121.7	7122.8	6945.5	6878.0	6749.7	6633.3	6340.7	6175.3	6154.7
12.5°	7501.3	7448.0	7426.3	7410.0	7214.2	7169.6	6928.1	6833.4	6521.2	6283.0	6255.8
15°	7656.9	7606.8	7575.3	7538.3	7429.5	7356.7	7252.2	7036.8	6735.5	6456.0	6422.3
17.5°	7251.1	7165.2	7016.2	6950.9	6925.9	7031.4	7480.7	7370.8	7011.8	6701.8	6665.9
20°	6180.8	6259.1	6372.2	6115.5	6194.9	6979.2	7822.2	7812.4	7398.0	6996.6	6949.8
22.5°	5258.3	5051.7	5408.4	5800.0	6050.2	6789.9	7954.9	8322.6	7921.2	7411.0	7356.7
25°	4310.9	4428.4	4909.2	5697.8	6048.1	6646.3	7882.1	8714.2	8590.2	7975.6	7911.4
27.5°	4182.5	4184.7	4647.0	5250.7	6167.7	6979.2	7961.5	8729.4	9346.2	8705.5	8581.5
30°	4155.3	4142.3	4267.4	5000.5	5956.7	7290.3	8472.7	8865.4	9530.0	9521.3	9356.0
32.5°	4028.0	4020.4	4151.0	4483.8	5505.3	7619.9	8956.8	9499.6	9463.7	10256.7	10212.1
35°	3846.4	3873.6	4035.7	4381.6	5293.1	7345.8	9453.9	10226.2	10287.1	9899.9	10077.2
37.5°	3657.1	3672.3	3829.0	4246.7	4938.5	6866.1	9832.4	10938.7	11147.6	10448.1	10306.7
40°	3399.3	3430.9	3614.7	4084.6	4866.7	6421.2	9564.9	11750.2	12075.4	11284.6	11067.1
42.5°	3126.3	3141.5	3365.6	3821.4	4747.1	6427.7	9015.5	12450.7	12930.4	12048.3	11827.4
45°	2887.0	2891.3	3101.3	3509.2	4511.0	6387.4	8668.5	12479.0	13954.0	12866.3	12588.9
47.5°	2594.4	2635.7	2843.5	3250.3	4209.7	6252.6	8830.6	11601.2	14980.9	13646.2	13392.7
50°	1989.5	2022.2	2424.7	2996.8	3880.1	6027.4	8941.6	12308.2	13836.6	14492.5	14310.8
52.5°	1711.1	1655.6	1945.0	2711.8	3578.8	5652.1	8988.3	13300.3	13834.4	15258.3	15076.6
55°	732.1	1122.6	1752.4	2226.7	3303.6	5151.7	8954.6	14270.6	14508.8	15980.6	15917.5
57.5°	578.7	605.9	1287.9	1801.4	2977.3	4560.0	8802.3	14912.4	15100.6	16704.0	16524.5
60°	106.6	120.7	633.1	761.4	2156.0	3676.7	8247.5	15003.8	15532.4	17333.8	17104.3
62.5°	49.0	57.7	509.1	634.2	1724.1	3024.0	7772.2	14974.4	15931.6	17801.5	17599.2
65°	22.8	29.4	455.8	575.4	1492.4	2821.7	6948.7	14895.0	15843.5	18053.9	17725.4
67.5°	17.4	25.0	418.8	516.7	1241.2	2620.5	6166.6	14061.7	15419.3	17663.4	17207.6
70°	17.4	25.0	382.9	469.9	1053.0	2364.8	5006.0	13018.6	14451.2	16676.8	16297.1
72.5°	18.5	25.0	340.5	425.3	912.6	2041.8	3910.6	11353.2	13290.5	15314.9	14915.6
75°	18.5	25.0	293.7	376.4	769.1	1710.0	2618.3	8114.8	11447.8	13034.9	12591.1
77.5°	18.5	25.0	243.7	314.4	626.6	1366.3	1693.7	4375.1	9006.8	10689.6	10120.7
80°	18.5	25.0	181.7	238.2	471.0	963.8	1011.6	2206.0	4846.1	7022.7	7121.7
82.5°	18.5	23.9	126.2	174.0	307.8	528.7	559.1	1064.9	1788.3	2880.4	2920.7
85°	17.4	20.7	90.3	115.3	168.6	199.1	271.9	529.7	857.2	1229.2	1219.4
87.5°	10.9	10.9	29.4	45.7	68.5	78.3	121.8	195.8	295.9	405.7	382.9
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: P591352

CATALOG NUMBER: CTN-CA8-230-730-U-T2-SSS-HM-EX90

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4	5978.4
2.5°	6008.9	5983.9	5952.3	5943.6	5869.7	5834.9	5764.1	5795.7	5759.8	5730.4	5764.1
5°	6017.6	5980.6	5914.3	5835.9	5678.2	5606.4	5506.3	5517.2	5465.0	5424.8	5447.6
7.5°	6039.4	5993.7	5889.2	5713.0	5524.8	5411.7	5307.3	5388.9	5353.0	5322.5	5345.4
10°	6050.2	6014.3	5829.4	5643.4	5372.5	5310.5	5180.0	5170.2	5173.5	5170.2	5206.1
12.5°	6079.6	6028.5	5759.8	5522.7	5292.1	5127.8	5047.3	5046.2	4942.9	4898.3	4917.9
15°	6166.6	6055.7	5713.0	5379.1	5124.5	5015.8	4761.2	4762.3	4718.8	4667.7	4666.6
17.5°	6340.7	6137.3	5713.0	5282.3	4970.1	4750.3	4528.4	4407.7	4378.3	4384.8	4380.5
20°	6570.2	6274.3	5710.8	5139.8	4752.5	4525.2	4205.4	4103.1	4010.6	4017.2	4017.2
22.5°	6899.8	6476.6	5715.2	5009.2	4544.7	4235.8	3875.8	3746.3	3647.3	3650.6	3650.6
25°	7373.0	6823.6	5766.3	4929.8	4266.3	3895.3	3532.0	3330.8	3229.6	3230.7	3232.9
27.5°	7975.6	7307.7	5943.6	4761.2	4034.6	3492.9	3094.7	2946.8	2845.6	2819.5	2819.5
30°	8657.6	7888.6	6173.2	4651.3	3675.6	3039.3	2708.6	2598.7	2476.9	2441.0	2441.0
32.5°	9413.6	8471.6	6410.3	4516.5	3337.3	2649.8	2374.6	2273.5	2121.2	2076.6	2061.3
35°	10200.1	9074.3	6698.5	4327.2	2912.0	2328.9	2085.3	1962.4	1852.5	1793.7	1779.6
37.5°	10624.3	9760.7	6958.5	4135.7	2583.5	2075.5	1803.5	1707.8	1634.9	1593.6	1586.0
40°	11207.4	10259.9	7093.4	3819.2	2229.9	1817.7	1543.6	1539.2	1549.0	1512.0	1509.8
42.5°	11801.3	10752.7	7056.4	3395.0	1954.7	1554.4	1413.0	1488.1	1542.5	1509.8	1512.0
45°	12544.3	11416.3	7191.3	2949.0	1682.8	1408.7	1385.8	1473.9	1549.0	1541.4	1541.4
47.5°	13295.9	12058.0	6942.2	2402.9	1500.0	1366.3	1389.1	1451.1	1544.6	1569.7	1564.2
50°	13908.4	12497.5	6788.8	1939.5	1396.7	1367.3	1400.0	1422.8	1525.1	1565.3	1564.2
52.5°	14403.3	12916.3	6216.7	1637.1	1338.0	1371.7	1434.8	1418.5	1490.3	1532.7	1557.7
55°	15103.8	13496.1	5565.1	1520.7	1307.5	1367.3	1446.7	1433.7	1463.1	1482.6	1501.1
57.5°	15645.5	13784.3	4692.7	1445.7	1280.3	1360.8	1437.0	1438.0	1452.2	1444.6	1437.0
60°	16100.2	14047.6	3838.8	1372.8	1245.5	1346.7	1395.6	1410.9	1406.5	1396.7	1377.1
62.5°	16322.1	14332.6	2981.6	1295.5	1208.5	1305.3	1328.2	1345.6	1335.8	1303.2	1301.0
65°	16238.4	14128.1	2210.4	1211.8	1163.9	1259.6	1258.6	1266.2	1270.5	1229.2	1233.5
67.5°	15768.5	13229.6	1683.9	1105.2	1112.8	1194.4	1188.9	1193.3	1181.3	1153.0	1157.4
70°	14402.2	12209.2	1194.4	925.7	1008.4	1092.1	1099.7	1118.2	1091.0	1041.0	1044.3
72.5°	12382.2	10455.7	837.6	737.5	885.5	992.1	987.7	986.6	949.6	969.2	993.1
75°	10561.3	8007.1	636.4	593.9	699.4	853.9	902.9	906.1	911.6	1107.4	1121.5
77.5°	8130.1	4843.9	541.7	468.8	542.8	708.1	799.5	836.5	1148.7	1190.0	1168.3
80°	4845.0	2797.8	418.8	365.5	438.4	540.6	683.1	883.3	1154.1	1031.2	986.6
82.5°	2358.3	1297.7	304.6	278.5	323.1	392.7	536.3	1029.0	976.8	797.3	786.5
85°	880.0	438.4	182.7	190.4	215.4	257.8	407.9	982.3	749.5	649.4	613.5
87.5°	219.7	80.5	74.0	76.1	96.8	129.4	208.9	473.2	363.3	301.3	294.8
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)