

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: P591208

Luminaire Tested: **CTN-CA10-310-727-U-T2-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591208  
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-CA10-310-727-U-T2-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: 29812 lumens  
Efficiency: N/A  
Efficacy: 95.4 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G4

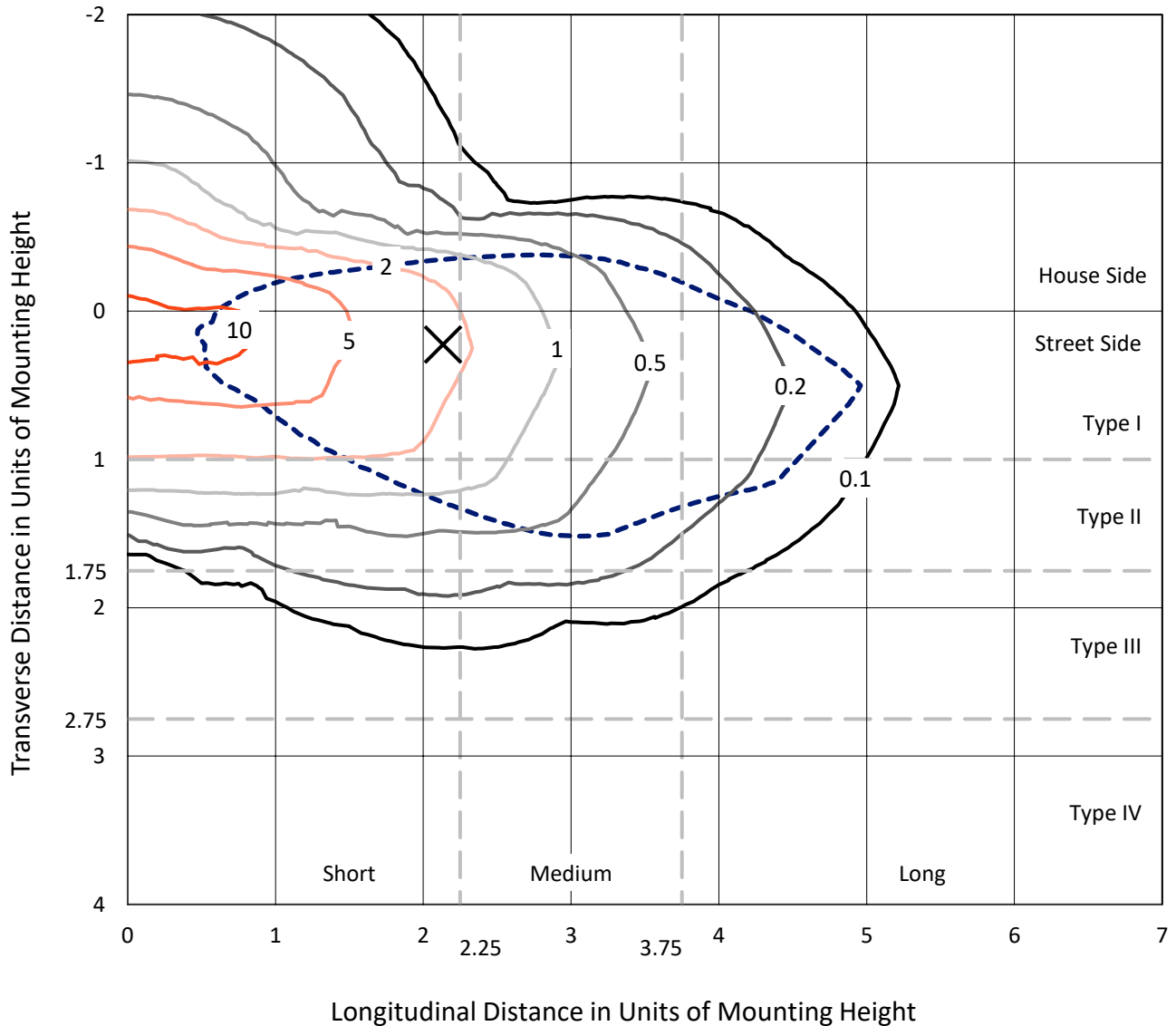
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P591208  
 CATALOG NUMBER: CTN-CA10-310-727-U-T2-SSS-HM-EX90

### Iso-Footcandle Lines of Horizontal Illumination

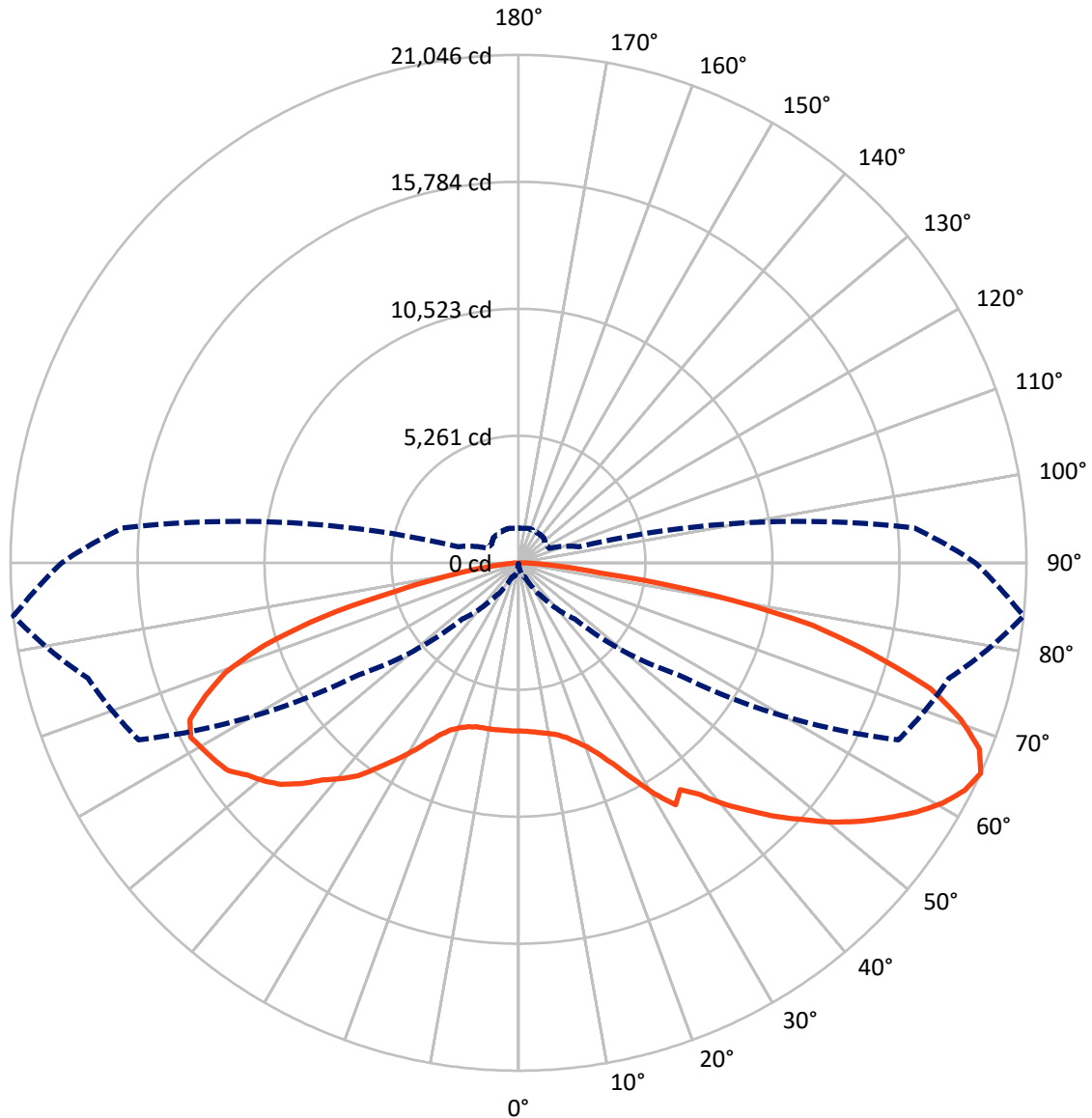
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.9 fc  
 Type II - Short - N/A

REPORT NUMBER: P591208  
CATALOG NUMBER: CTN-CA10-310-727-U-T2-SSS-HM-EX90

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P591208  
 CATALOG NUMBER: CTN-CA10-310-727-U-T2-SSS-HM-EX90

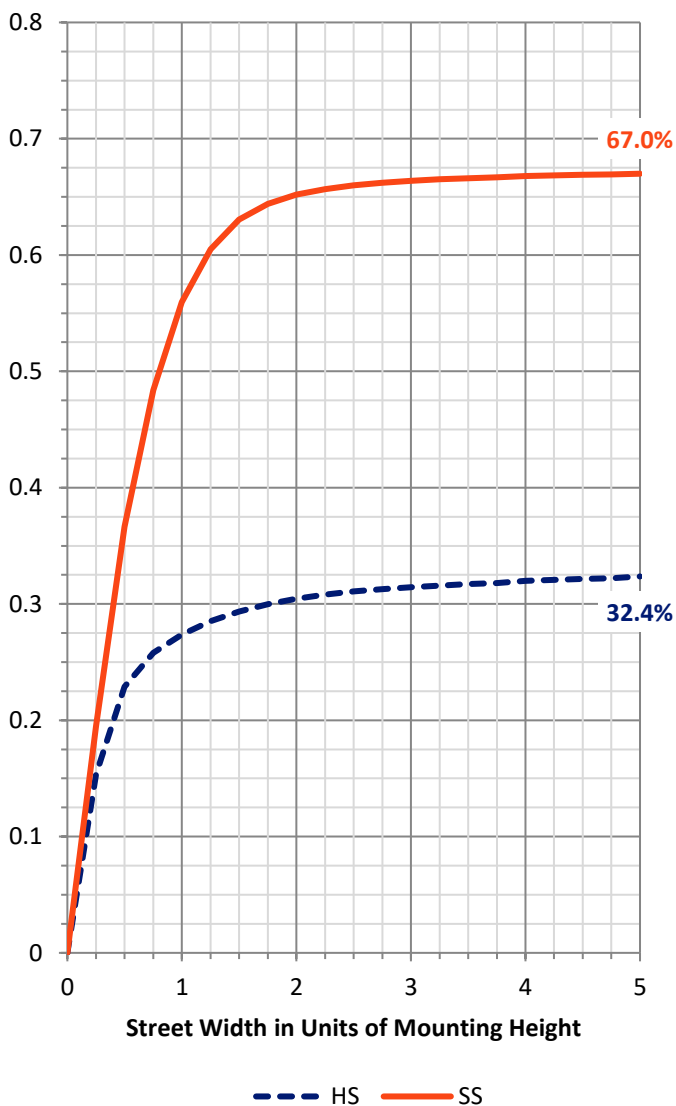
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9869.3	0.0	9869.3
	% Fixture	33.1	0.0	33.1
<b>Street Side</b>	Lumens	19942.7	0.0	19942.7
	% Fixture	66.9	0.0	66.9
<b>Total</b>	Lumens	29812.0	0.0	29812.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	672.8	2.3
10°-20°	2002.6	6.7
20°-30°	3008.9	10.1
30°-40°	4001.2	13.4
40°-50°	4940.3	16.6
50°-60°	5551.5	18.6
60°-70°	5444.8	18.3
70°-80°	3540.4	11.9
80°-90°	649.7	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°	29812.0	100.0
0°-180°	29812.0	100.0

**Coefficient of Utilization**

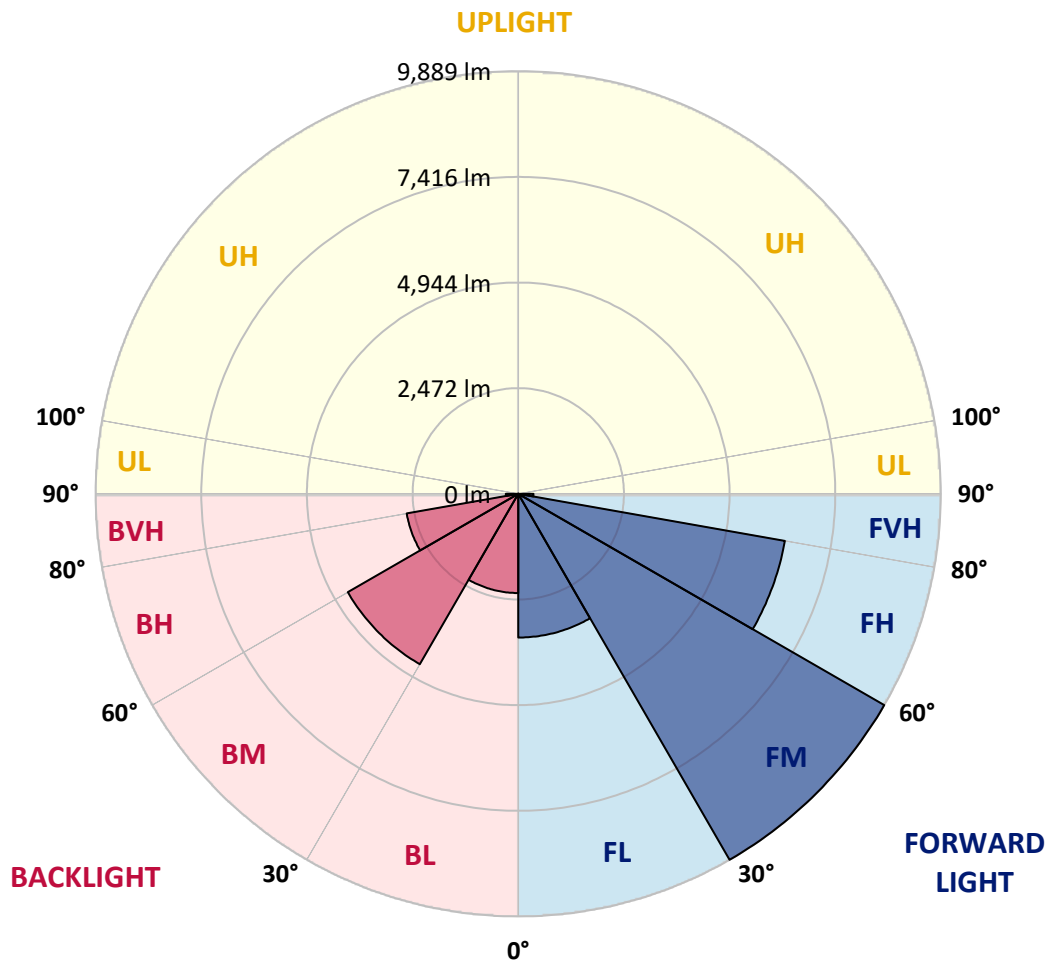


REPORT NUMBER: P591208  
 CATALOG NUMBER: CTN-CA10-310-727-U-T2-SSS-HM-EX90

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3362.6	11.3			
FM (30°-60°)	9888.5	33.2			
FH (60°-80°)	6334.7	21.2			G3/7500
FVH (80°-90°)	356.9	1.2			G3/500
BL (0°-30°)	2321.6	7.8	B3/2500		
BM (30°-60°)	4604.4	15.4	B3/5000		
BH (60°-80°)	2650.5	8.9	B4/5000		G4/5000
BVH (80°-90°)	292.8	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 II Short





REPORT NUMBER: P591208

CATALOG NUMBER: CTN-CA10-310-727-U-T2-SSS-HM-EX90

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	84°	85°
0°	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2
2.5°	7268.4	7199.9	7207.5	7240.5	7113.7	7155.6	7084.5	7097.2	7012.3	6997.1	7005.9
5°	7779.4	7705.9	7705.9	7726.2	7513.1	7456.1	7258.3	7225.3	7099.8	7044.0	7046.5
7.5°	8043.2	7970.9	7957.0	7976.0	7822.5	7835.2	7632.3	7438.3	7215.2	7116.3	7111.2
10°	8431.2	8350.1	8301.9	8303.1	8096.4	8017.8	7868.2	7732.5	7391.4	7198.7	7174.6
12.5°	8744.4	8682.3	8656.9	8637.9	8409.7	8357.7	8076.2	7965.8	7601.9	7324.2	7292.5
15°	8925.7	8867.4	8830.6	8787.5	8660.7	8575.8	8454.0	8203.0	7851.7	7525.8	7486.5
17.5°	8452.8	8352.6	8178.9	8102.8	8073.6	8196.6	8720.3	8592.3	8173.8	7812.4	7770.6
20°	7205.0	7296.3	7428.2	7128.9	7221.5	8135.8	9118.5	9107.1	8624.0	8156.0	8101.5
22.5°	6129.7	5888.8	6304.7	6761.2	7052.8	7915.1	9273.2	9701.8	9233.9	8639.2	8575.8
25°	5025.2	5162.2	5722.7	6642.0	7050.3	7747.7	9188.2	10158.3	10013.7	9297.3	9222.5
27.5°	4875.6	4878.2	5417.1	6120.8	7189.8	8135.8	9280.8	10176.0	10895.0	10148.1	10003.6
30°	4843.9	4828.7	4974.5	5829.2	6943.8	8498.4	9876.8	10334.5	11109.3	11099.2	10906.4
32.5°	4695.6	4686.7	4838.8	5226.9	6417.6	8882.6	10441.1	11073.8	11032.0	11956.4	11904.4
35°	4483.8	4515.5	4704.4	5107.7	6170.3	8563.1	11020.6	11920.9	11991.9	11540.4	11747.1
37.5°	4263.2	4280.9	4463.5	4950.4	5756.9	8003.9	11461.8	12751.4	12994.9	12179.5	12014.7
40°	3962.6	3999.4	4213.7	4761.5	5673.2	7485.3	11149.9	13697.4	14076.5	13154.7	12901.1
42.5°	3644.4	3662.1	3923.3	4454.6	5533.7	7492.9	10509.5	14514.0	15073.2	14044.8	13787.4
45°	3365.4	3370.5	3615.2	4090.7	5258.6	7445.9	10105.0	14547.0	16266.4	14998.4	14675.0
47.5°	3024.3	3072.5	3314.7	3788.9	4907.3	7288.7	10294.0	13523.7	17463.5	15907.6	15612.1
50°	2319.2	2357.3	2826.5	3493.5	4523.1	7026.2	10423.3	14347.9	16129.5	16894.1	16682.4
52.5°	1994.6	1930.0	2267.3	3161.2	4171.9	6588.7	10477.8	15504.3	16127.0	17786.8	17575.1
55°	853.4	1308.6	2042.8	2595.7	3851.0	6005.4	10438.5	16635.4	16913.1	18628.8	18555.3
57.5°	674.6	706.3	1501.4	2099.9	3470.6	5315.6	10261.0	17383.6	17603.0	19472.0	19262.8
60°	124.3	140.8	738.0	887.6	2513.3	4286.0	9614.3	17490.1	18106.4	20206.2	19938.7
62.5°	57.1	67.2	593.4	739.3	2009.8	3525.2	9060.2	17455.9	18571.7	20751.5	20515.6
65°	26.6	34.2	531.3	670.8	1739.8	3289.3	8100.3	17363.3	18469.0	21045.7	20662.7
67.5°	20.3	29.2	488.2	602.3	1446.8	3054.7	7188.5	16392.0	17974.5	20590.5	20059.2
70°	20.3	29.2	446.4	547.8	1227.5	2756.7	5835.5	15175.9	16845.9	19440.3	18997.8
72.5°	21.6	29.2	396.9	495.8	1063.9	2380.1	4558.6	13234.6	15492.9	17852.8	17387.4
75°	21.6	29.2	342.4	438.7	896.5	1993.4	3052.2	9459.6	13344.9	15194.9	14677.6
77.5°	21.6	29.2	284.0	366.5	730.4	1592.7	1974.3	5100.1	10499.4	12461.0	11797.9
80°	21.6	29.2	211.8	277.7	549.1	1123.5	1179.3	2571.6	5649.1	8186.5	8301.9
82.5°	21.6	27.9	147.1	202.9	358.9	616.3	651.8	1241.4	2084.7	3357.8	3404.7
85°	20.3	24.1	105.2	134.4	196.5	232.1	317.0	617.5	999.2	1432.9	1421.5
87.5°	12.7	12.7	34.2	53.3	79.9	91.3	142.0	228.2	344.9	473.0	446.4
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: P591208

CATALOG NUMBER: CTN-CA10-310-727-U-T2-SSS-HM-EX90

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2	6969.2
2.5°	7004.7	6975.5	6938.7	6928.6	6842.4	6801.8	6719.4	6756.1	6714.3	6680.0	6719.4
5°	7014.8	6971.7	6894.3	6803.0	6619.2	6535.5	6418.8	6431.5	6370.6	6323.7	6350.4
7.5°	7040.2	6986.9	6865.2	6659.8	6440.4	6308.5	6186.8	6281.9	6240.0	6204.5	6231.2
10°	7052.8	7011.0	6795.4	6578.6	6262.9	6190.6	6038.4	6027.0	6030.8	6027.0	6068.8
12.5°	7087.1	7027.5	6714.3	6437.8	6169.0	5977.5	5883.7	5882.4	5762.0	5710.0	5732.8
15°	7188.5	7059.2	6659.8	6270.5	5973.7	5846.9	5550.2	5551.5	5500.8	5441.2	5439.9
17.5°	7391.4	7154.3	6659.8	6157.6	5793.7	5537.5	5278.9	5138.1	5103.9	5111.5	5106.4
20°	7659.0	7314.1	6657.2	5991.5	5540.1	5275.1	4902.2	4783.1	4675.3	4682.9	4682.9
22.5°	8043.2	7549.9	6662.3	5839.3	5297.9	4937.8	4518.0	4367.1	4251.7	4255.5	4255.5
25°	8594.8	7954.4	6721.9	5746.8	4973.3	4540.9	4117.3	3882.7	3764.8	3766.1	3768.6
27.5°	9297.3	8518.7	6928.6	5550.2	4703.2	4071.7	3607.6	3435.1	3317.2	3286.8	3286.8
30°	10092.3	9195.8	7196.1	5422.1	4284.7	3542.9	3157.4	3029.4	2887.3	2845.5	2845.5
32.5°	10973.6	9875.5	7472.6	5264.9	3890.4	3088.9	2768.1	2650.2	2472.7	2420.7	2402.9
35°	11890.4	10578.0	7808.6	5044.3	3394.5	2714.9	2430.8	2287.5	2159.5	2091.0	2074.5
37.5°	12385.0	11378.1	8111.7	4821.1	3011.6	2419.4	2102.4	1990.8	1905.9	1857.7	1848.8
40°	13064.6	11960.2	8268.9	4452.1	2599.5	2118.9	1799.4	1794.3	1805.7	1762.6	1760.0
42.5°	13757.0	12534.6	8225.8	3957.6	2278.7	1812.0	1647.2	1734.7	1798.1	1760.0	1762.6
45°	14623.1	13308.1	8383.0	3437.7	1961.7	1642.1	1615.5	1718.2	1805.7	1796.8	1796.8
47.5°	15499.3	14056.2	8092.6	2801.1	1748.6	1592.7	1619.3	1691.6	1800.6	1829.8	1823.4
50°	16213.2	14568.5	7913.8	2260.9	1628.2	1593.9	1632.0	1658.6	1777.8	1824.7	1823.4
52.5°	16790.1	15056.7	7246.9	1908.4	1559.7	1599.0	1672.5	1653.5	1737.2	1786.7	1815.8
55°	17606.8	15732.6	6487.3	1772.7	1524.2	1593.9	1686.5	1671.3	1705.5	1728.3	1749.9
57.5°	18238.2	16068.6	5470.3	1685.2	1492.5	1586.3	1675.1	1676.4	1692.8	1684.0	1675.1
60°	18768.3	16375.5	4474.9	1600.3	1451.9	1569.8	1626.9	1644.7	1639.6	1628.2	1605.3
62.5°	19027.0	16707.7	3475.7	1510.2	1408.8	1521.7	1548.3	1568.6	1557.2	1519.1	1516.6
65°	18929.3	16469.3	2576.7	1412.6	1356.8	1468.4	1467.1	1476.0	1481.1	1432.9	1438.0
67.5°	18381.5	15421.9	1962.9	1288.3	1297.2	1392.3	1386.0	1391.0	1377.1	1344.1	1349.2
70°	16788.9	14232.5	1392.3	1079.1	1175.5	1273.1	1282.0	1303.5	1271.8	1213.5	1217.3
72.5°	14434.1	12188.4	976.4	859.7	1032.2	1156.5	1151.4	1150.1	1107.0	1129.8	1157.7
75°	12311.4	9334.1	741.8	692.4	815.4	995.4	1052.5	1056.3	1062.6	1290.9	1307.4
77.5°	9477.3	5646.6	631.5	546.5	632.8	825.5	932.0	975.1	1339.1	1387.2	1361.9
80°	5647.9	3261.4	488.2	426.1	511.0	630.2	796.3	1029.6	1345.4	1202.1	1150.1
82.5°	2749.1	1512.8	355.1	324.6	376.6	457.8	625.1	1199.6	1138.7	929.5	916.8
85°	1025.8	511.0	213.0	221.9	251.1	300.5	475.5	1145.0	873.7	757.0	715.2
87.5°	256.1	93.8	86.2	88.8	112.9	150.9	243.5	551.6	423.5	351.2	343.6
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)