

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: P232724

Luminaire Tested: **CTN-8-6-D-E1-T4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232724  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-20)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-8-6-D-E1-T4  
Description: CELESTEON HIGH MAST LUMINAIRE  
(8) 70 CRI, 4000K LEDS AND TYPE IV OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 61862 lumens  
Efficiency: N/A  
Efficacy: 129.7 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B4 - U0 - G5

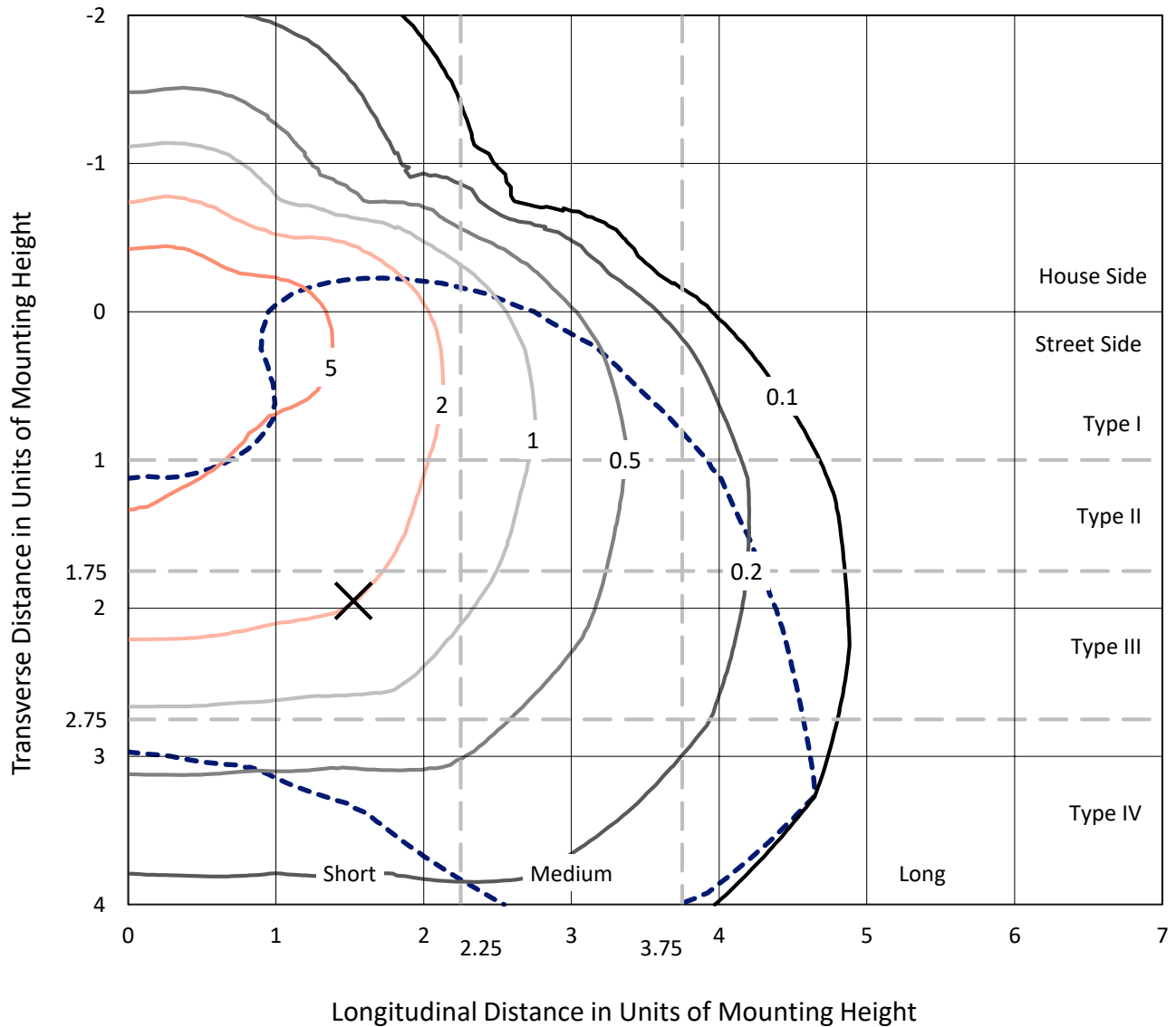
Input Watts (W): 477  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P232724  
 CATALOG NUMBER: CTN-8-6-D-E1-T4

### Iso-Footcandle Lines of Horizontal Illumination

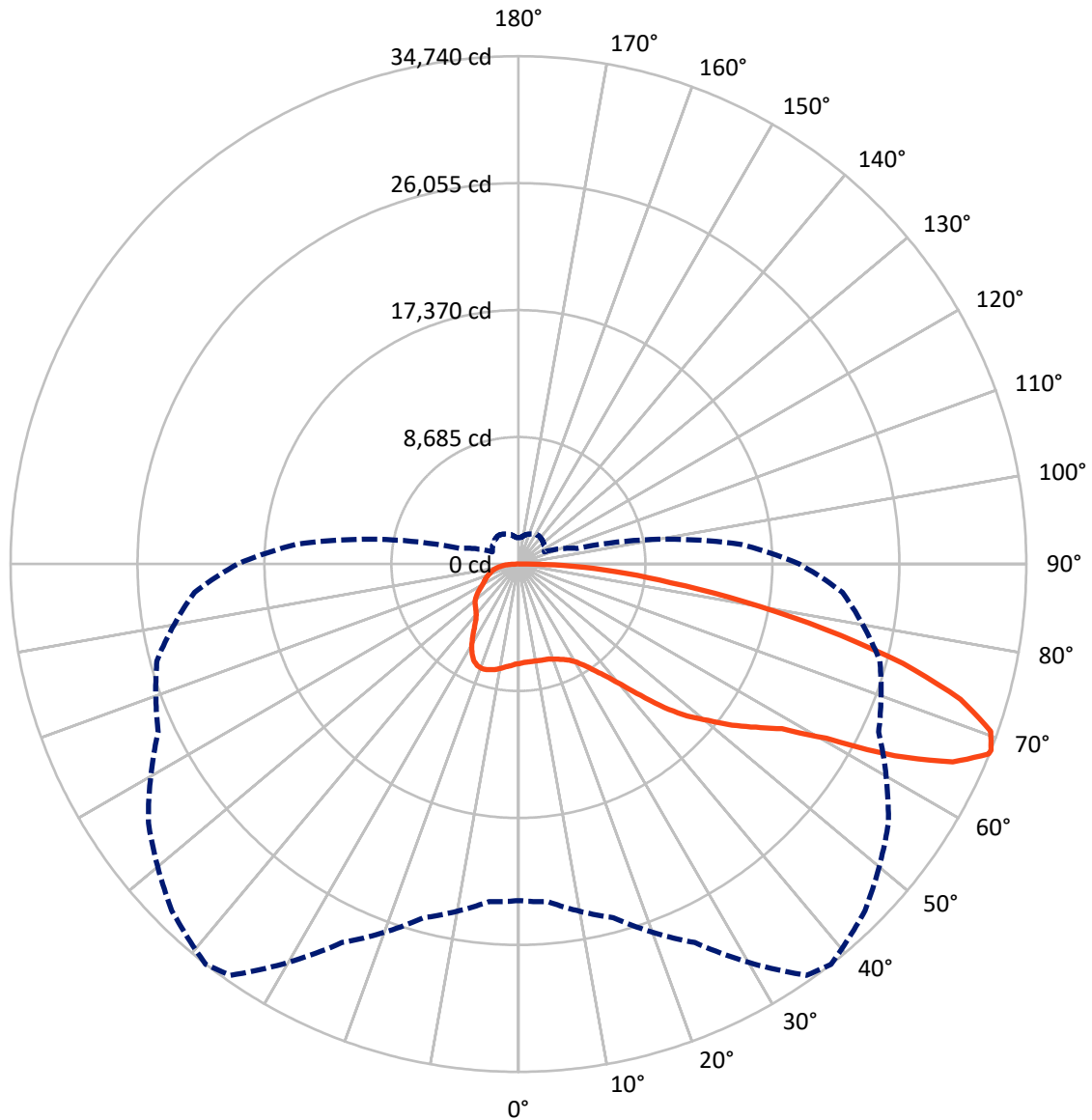
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.8 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P232724  
CATALOG NUMBER: CTN-8-6-D-E1-T4

### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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CATALOG NUMBER: CTN-8-6-D-E1-T4

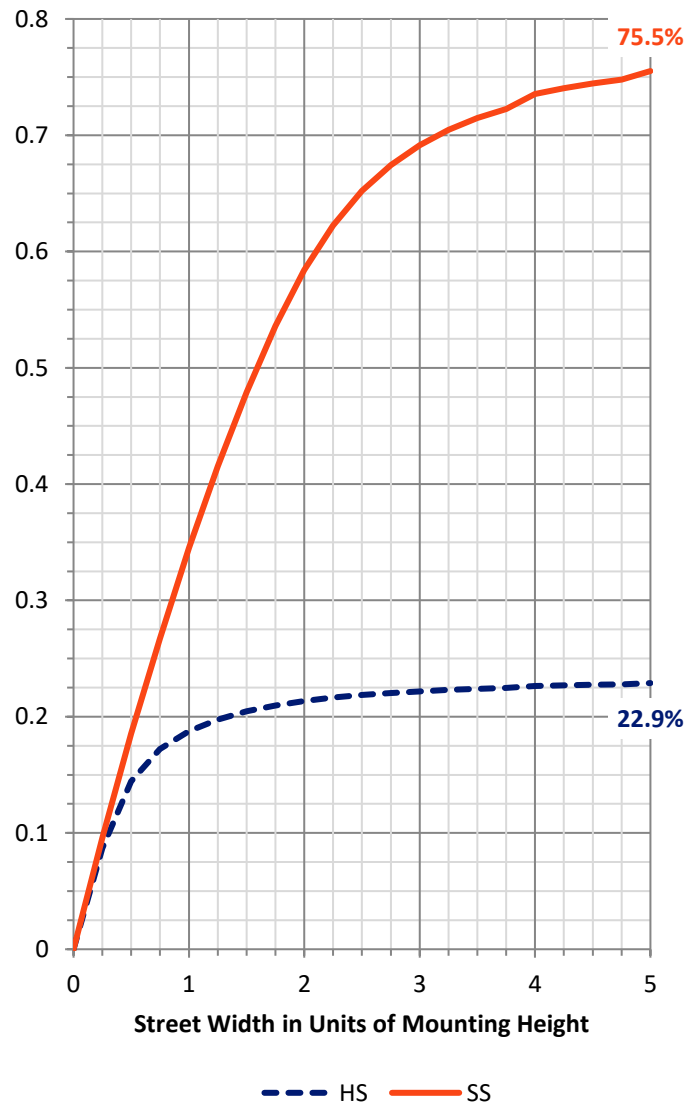
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	14437.3	0.0	14437.3
	% Fixture	23.3	0.0	23.3
<b>Street Side</b>	Lumens	47424.7	0.0	47424.7
	% Fixture	76.7	0.0	76.7
<b>Total</b>	Lumens	61862.0	0.0	61862.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	659.1	1.1
10°-20°	2034.5	3.3
20°-30°	3456.4	5.6
30°-40°	5234.2	8.5
40°-50°	8657.4	14.0
50°-60°	12470.5	20.2
60°-70°	15727.1	25.4
70°-80°	11193.2	18.1
80°-90°	2429.6	3.9
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°	61862.0	100.0
0°-180°	61862.0	100.0



REPORT NUMBER: P232724

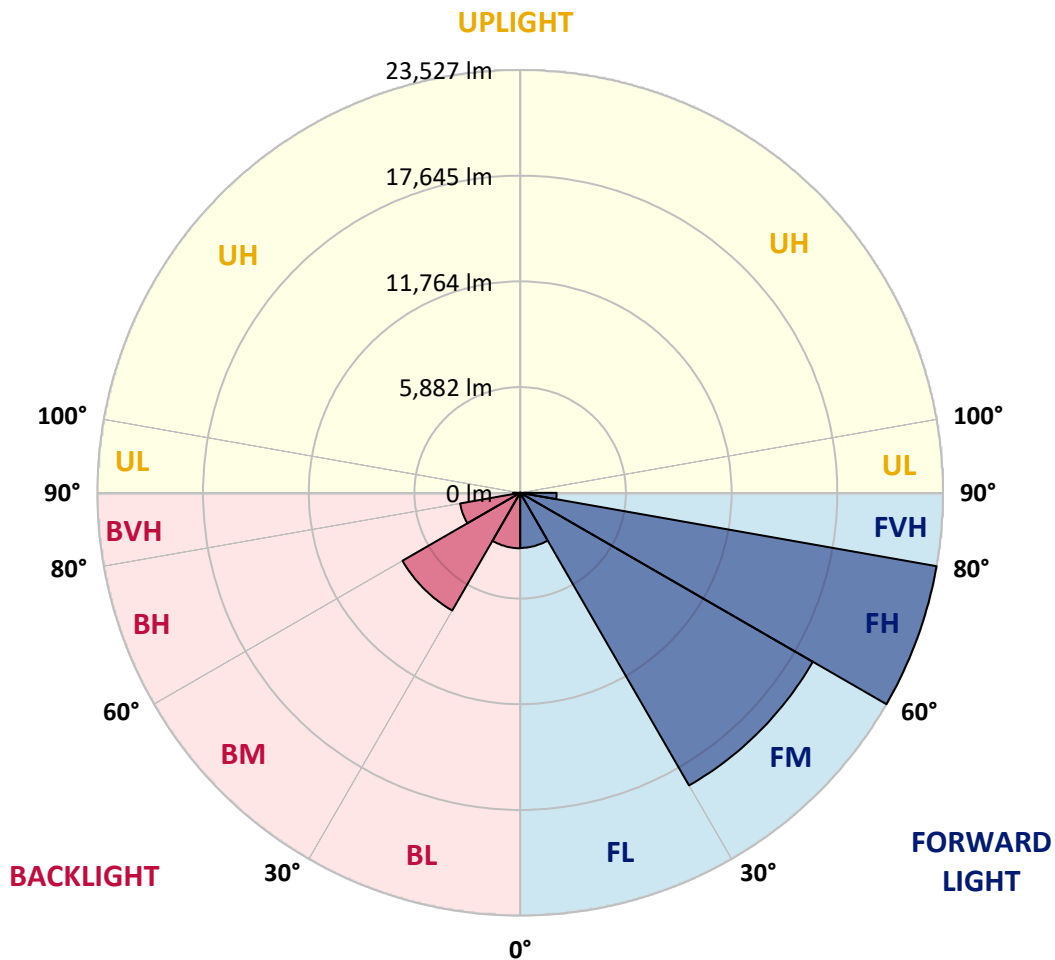
CATALOG NUMBER: CTN-8-6-D-E1-T4

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3065.0	5.0			
FM	(30°-60°)	18801.8	30.4			
FH	(60°-80°)	23527.1	38.0			G5
FVH	(80°-90°)	2030.9	3.3			G5
BL	(0°-30°)	3085.0	5.0	B4/5000		
BM	(30°-60°)	7560.3	12.2	B4/8500		
BH	(60°-80°)	3393.2	5.5	B4/5000		G4/5000
BVH	(80°-90°)	398.7	0.6			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0
2.5°	6790.9	6803.0	6794.9	6790.9	6738.6	6750.7	6770.8	6742.7	6811.0	6807.0	6847.2
5°	6726.6	6732.6	6734.6	6752.7	6702.5	6728.6	6752.7	6734.6	6807.0	6786.9	6843.2
7.5°	6708.5	6706.5	6708.5	6742.7	6688.4	6728.6	6756.7	6750.7	6829.1	6813.0	6881.3
10°	6662.3	6664.3	6670.3	6708.5	6680.4	6734.6	6784.9	6811.0	6915.5	6901.4	6979.8
12.5°	6581.9	6598.0	6620.1	6684.4	6690.4	6762.8	6837.1	6889.4	7026.0	7038.1	7136.6
15°	6511.5	6539.7	6577.9	6664.3	6700.5	6782.9	6877.3	6973.8	7152.7	7206.9	7331.5
17.5°	6533.7	6575.9	6626.1	6714.5	6740.7	6827.1	6933.6	7062.2	7283.3	7399.9	7560.6
20°	6670.3	6698.5	6740.7	6823.1	6857.2	6943.6	7030.1	7156.7	7444.1	7633.0	7831.9
22.5°	6841.1	6881.3	6909.5	6959.7	6999.9	7076.3	7166.7	7291.3	7631.0	7868.1	8141.4
25°	7024.0	7044.1	7084.3	7118.5	7168.7	7229.0	7331.5	7484.3	7844.0	8135.4	8517.3
27.5°	7192.8	7202.9	7279.3	7307.4	7405.9	7450.1	7530.5	7733.5	8121.3	8481.1	8951.4
30°	7440.0	7460.1	7518.4	7584.7	7729.4	7773.7	7856.1	8069.1	8491.1	8951.4	9516.1
32.5°	7908.3	7960.6	7952.5	8022.9	8193.7	8252.0	8364.5	8641.9	9102.1	9630.7	10301.9
35°	8856.9	8931.3	8838.8	8744.4	8834.8	8913.2	9086.0	9492.0	10060.7	10933.0	11596.2
37.5°	10410.4	10484.8	10155.2	9853.7	9656.8	9719.1	9954.2	10529.0	11399.2	12914.6	13654.2
40°	12225.2	12305.6	11847.4	11304.8	10860.6	10836.5	10908.9	11640.4	12896.5	15119.3	15696.0
42.5°	13806.9	14017.9	13419.0	12950.7	12376.0	12279.5	12104.6	12844.2	14480.2	17161.1	17486.7
45°	15344.3	15549.3	15077.0	14753.5	14166.6	14009.9	13678.3	14126.4	16033.7	18947.8	18961.9
47.5°	16755.2	16920.0	16371.3	16164.3	15585.5	15517.2	15177.5	15491.1	17472.7	20461.1	20175.8
50°	18332.8	18505.7	17631.4	17376.2	16909.9	16817.5	16706.9	16932.0	19122.7	21765.5	21206.7
52.5°	20262.2	20197.9	19118.6	18533.8	18286.6	18308.7	18184.1	18433.3	20873.1	22870.8	22018.7
55°	22571.4	22241.8	21056.0	20169.7	19601.0	19709.5	19546.7	19912.5	22603.5	23803.3	22605.5
57.5°	23883.7	23974.2	23861.6	22722.1	21275.1	21259.0	21001.8	21353.5	24114.8	24565.0	22963.3
60°	25797.0	26170.8	26313.5	26006.0	24707.7	24195.2	22907.0	22826.6	25391.0	25222.2	23146.1
62.5°	27006.8	27181.7	28039.9	28411.7	28829.7	28918.1	26872.2	24601.2	26333.6	25557.8	23222.5
65°	26428.0	26604.9	28208.7	29665.7	32145.7	32644.2	31993.0	27412.8	26970.7	25632.2	22967.3
67.5°	23461.7	23678.7	25831.2	28817.6	34151.5	34688.1	33637.0	30654.5	27179.7	25588.0	22412.6
68°	23027.6	23188.3	25045.3	28570.4	34352.4	34740.3	33528.4	30899.7	27191.7	25602.0	22241.8
70°	19691.4	19974.8	21930.3	26321.5	34028.9	34276.1	32851.2	30763.0	26918.4	25372.9	20991.7
72.5°	15348.4	15740.3	17227.5	21861.9	31430.3	31631.3	30437.5	29255.7	26092.4	23783.2	17993.2
75°	11119.9	11455.5	12886.4	16871.7	26460.2	27173.7	26972.7	27185.7	23389.3	20151.6	13031.1
77.5°	7679.2	7966.6	9301.1	12589.0	20517.4	21419.8	22462.8	23015.5	19219.1	14950.4	6194.0
80°	4919.8	5140.9	6276.4	8865.0	14795.7	15643.8	16767.2	17340.0	13670.2	7520.4	1099.3
82.5°	2892.0	3042.7	3818.5	5719.7	9972.3	10488.8	11031.4	10070.8	5486.6	1439.0	693.4
85°	1437.0	1537.4	2013.8	3235.7	6200.0	6674.3	6855.2	4296.8	1159.6	526.6	472.3
87.5°	643.1	671.3	864.2	1457.1	2946.3	3105.0	3028.7	1336.5	233.1	197.0	168.8
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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CATALOG NUMBER: CTN-8-6-D-E1-T4

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0	6815.0
2.5°	6851.2	6835.1	6831.1	6857.2	6829.1	6863.3	6853.2	6929.6	6939.6	6911.5	6957.7
5°	6861.2	6853.2	6859.2	6907.5	6897.4	6967.8	6985.8	7062.2	7062.2	7040.1	7088.3
7.5°	6907.5	6907.5	6925.6	7014.0	7014.0	7074.3	7094.4	7178.8	7176.8	7176.8	7221.0
10°	7024.0	7024.0	7062.2	7174.8	7146.6	7225.0	7235.1	7279.3	7269.2	7271.2	7317.5
12.5°	7196.9	7206.9	7273.2	7371.7	7353.6	7381.8	7361.7	7353.6	7281.3	7281.3	7311.4
15°	7395.8	7438.0	7528.5	7618.9	7558.6	7548.6	7434.0	7333.5	7178.8	7112.5	7146.6
17.5°	7655.1	7727.4	7831.9	7896.3	7781.7	7699.3	7492.3	7231.0	6979.8	6833.1	6837.1
20°	7942.5	8038.9	8167.6	8189.7	8020.9	7815.9	7470.2	7060.2	6628.1	6395.0	6378.9
22.5°	8262.0	8382.6	8531.3	8444.9	8169.6	7836.0	7341.6	6796.9	6216.1	5824.2	5818.2
25°	8651.9	8782.6	8877.0	8635.8	8203.7	7733.5	7118.5	6386.9	5669.5	5247.4	5219.3
27.5°	9148.3	9234.7	9164.4	8734.3	8101.3	7488.3	6740.7	5860.4	5100.7	4718.9	4676.7
30°	9737.2	9727.1	9345.3	8706.2	7894.2	7100.4	6226.2	5289.6	4634.5	4306.9	4268.7
32.5°	10452.6	10307.9	9520.1	8571.5	7560.6	6591.9	5615.2	4815.3	4296.8	3965.2	3925.0
35°	11594.2	11186.2	9747.2	8368.5	7096.4	5979.0	5038.4	4449.6	4035.6	3655.7	3577.3
37.5°	13364.8	12504.6	10125.1	8155.5	6563.8	5378.1	4608.3	4184.3	3830.6	3400.5	3308.0
40°	15185.6	14036.0	10699.8	7926.4	6065.4	4923.9	4365.1	4059.7	3706.0	3291.9	3199.5
42.5°	16767.2	15464.9	11389.2	7639.0	5554.9	4566.1	4240.5	4019.5	3665.8	3271.9	3183.4
45°	18164.0	16749.2	12108.7	7305.4	5020.3	4276.7	4134.0	3963.2	3605.5	3225.6	3145.2
47.5°	19327.6	17772.1	12741.7	6935.6	4495.8	4063.7	4029.5	3830.6	3490.9	3125.1	3056.8
50°	20228.0	18499.6	13165.8	6523.6	4047.6	3896.9	3878.8	3627.6	3298.0	2948.3	2880.0
52.5°	20867.1	18988.0	13413.0	6368.9	3695.9	3703.9	3673.8	3406.5	3087.0	2739.3	2685.0
55°	21273.1	19323.6	13352.7	6169.9	3340.2	3432.6	3436.7	3243.7	2962.4	2624.7	2580.5
57.5°	21427.8	19309.6	12997.0	5173.1	2994.5	3107.1	3161.3	3131.2	2882.0	2552.4	2516.2
60°	21343.4	19082.5	12239.3	3790.4	2636.8	2789.5	2922.2	2916.1	2705.1	2393.6	2355.4
62.5°	21202.7	18555.9	10754.1	2713.1	2367.5	2564.4	2725.2	2670.9	2470.0	2196.6	2170.5
65°	20698.3	17627.4	8314.3	2170.5	2254.9	2437.8	2570.5	2478.0	2281.1	1995.7	1981.6
67.5°	19582.9	15770.4	4853.5	1979.6	2172.5	2331.3	2425.8	2311.2	2128.3	1851.0	1826.9
68°	19205.0	15294.1	4128.0	1961.5	2156.4	2305.2	2391.6	2271.0	2092.1	1822.8	1798.7
70°	17297.8	12396.1	1969.5	1887.1	2086.1	2184.6	2234.8	2124.3	1949.4	1710.3	1694.2
72.5°	13463.2	7478.2	1316.4	1774.6	1949.4	2043.9	2056.0	1883.1	1718.3	1541.5	1531.4
75°	7954.5	2482.0	1223.9	1607.8	1760.5	1891.2	1925.3	1752.5	1569.6	1364.6	1360.6
77.5°	1937.4	962.7	1155.6	1435.0	1595.7	1722.3	1748.5	1621.9	1461.1	1230.0	1221.9
80°	797.9	799.9	1077.2	1189.8	1368.6	1491.2	1529.4	1416.9	1272.2	1123.4	1107.4
82.5°	663.2	675.3	914.4	878.3	1095.3	1238.0	1276.2	1197.8	1147.6	986.8	970.7
85°	472.3	598.9	606.9	590.9	767.7	882.3	1075.2	1037.0	982.8	846.1	765.7
87.5°	221.1	349.7	263.3	253.2	389.9	522.5	615.0	645.1	558.7	434.1	401.9
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)