

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: P522241

Luminaire Tested: **CTN-CA8-480-730-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P522241  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-7)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-480-730-U-T5R-HSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE  
Light Source: (8) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 46151 lumens  
Efficiency: N/A  
Efficacy: 96.0 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B4 - U2 - G5

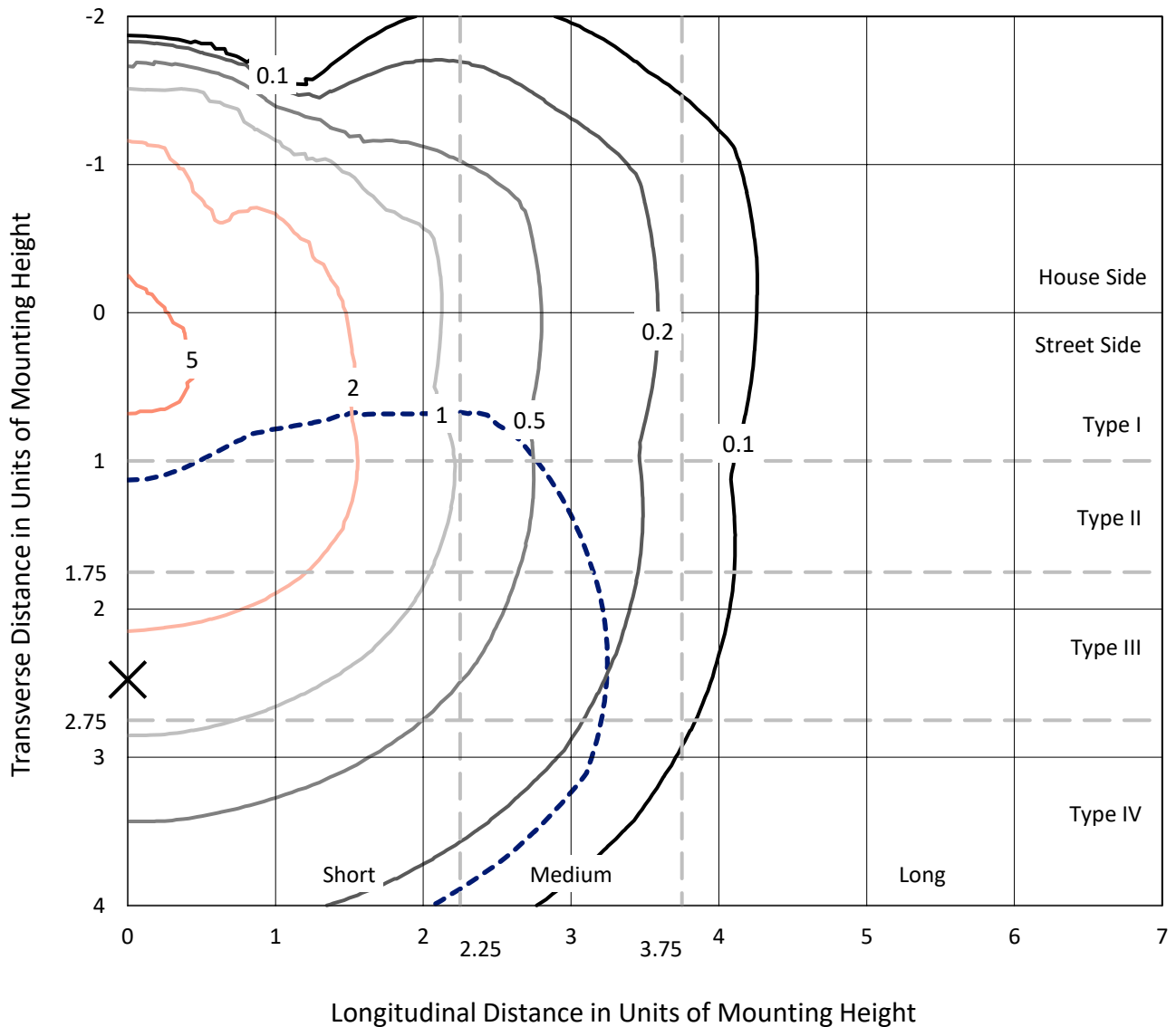
Input Watts (W): 480.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

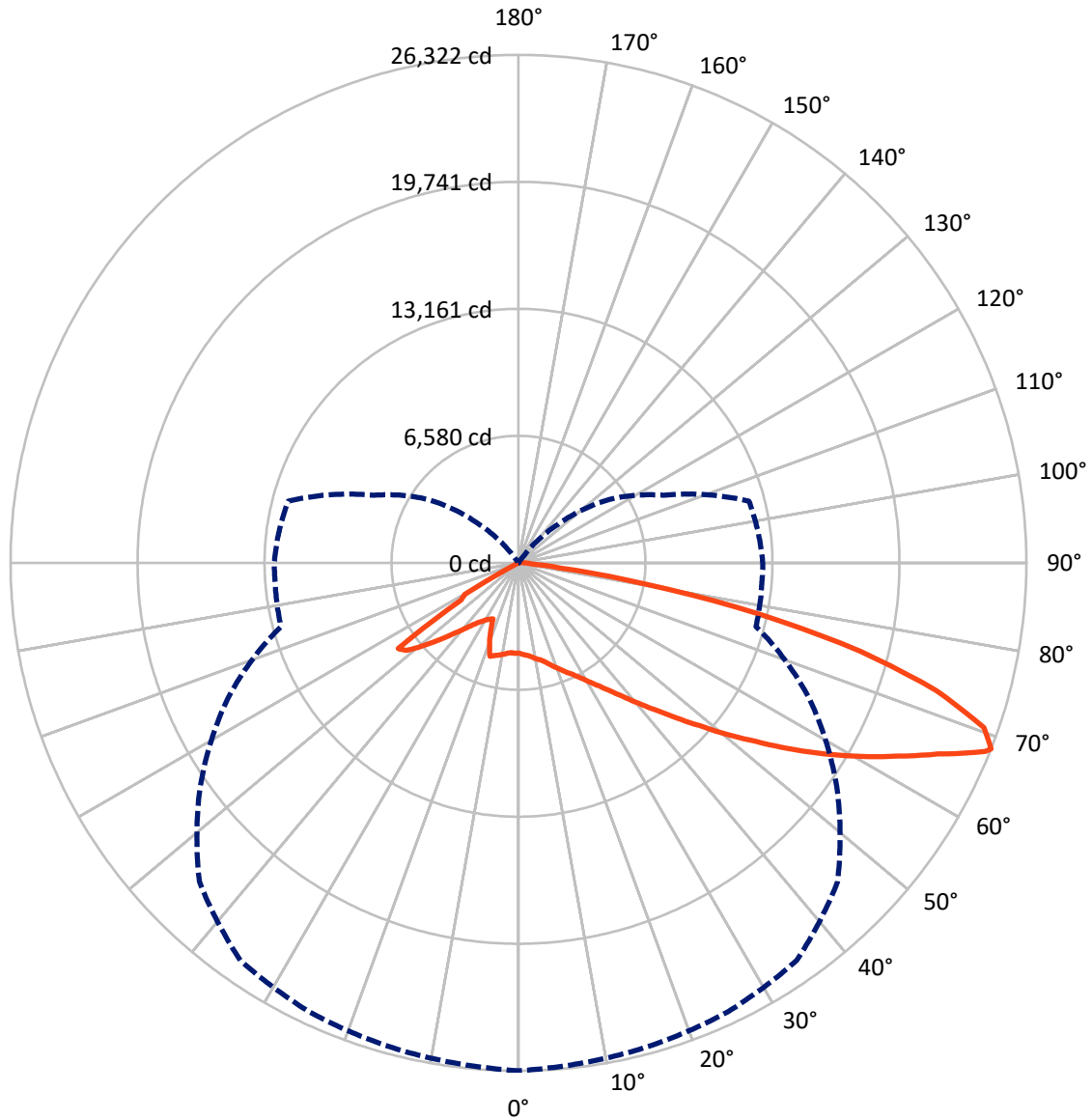
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.4 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical



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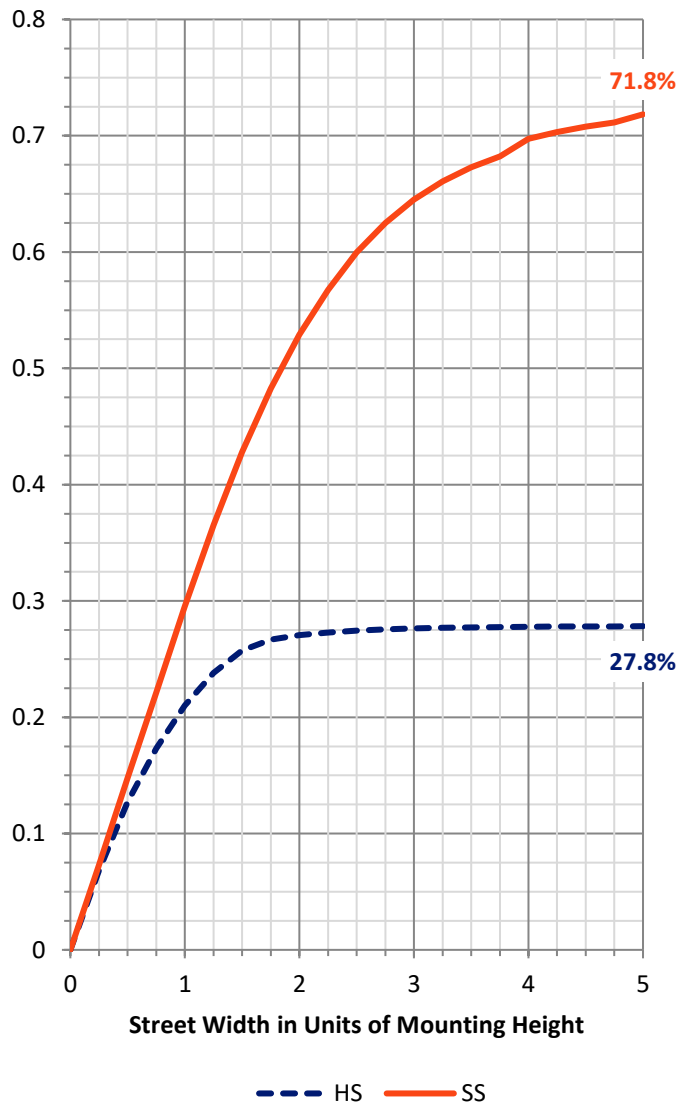
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	12890.0	0.3	12890.3
	% Fixture	27.9	0.0	27.9
<b>Street Side</b>	Lumens	33234.2	26.4	33260.7
	% Fixture	72.0	0.1	72.1
<b>Total</b>	Lumens	46124.3	26.7	46151.0
	% Fixture	99.9	0.1	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	453.8	1.0
10°-20°	1437.9	3.1
20°-30°	2434.4	5.3
30°-40°	3856.7	8.4
40°-50°	6305.4	13.7
50°-60°	9658.3	20.9
60°-70°	11875.6	25.7
70°-80°	9176.2	19.9
80°-90°	925.9	2.0
90°-100°	26.3	0.1
100°-110°	0.4	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°	46124.3	99.9
0°-180°	46151.0	100.0

**Coefficient of Utilization**

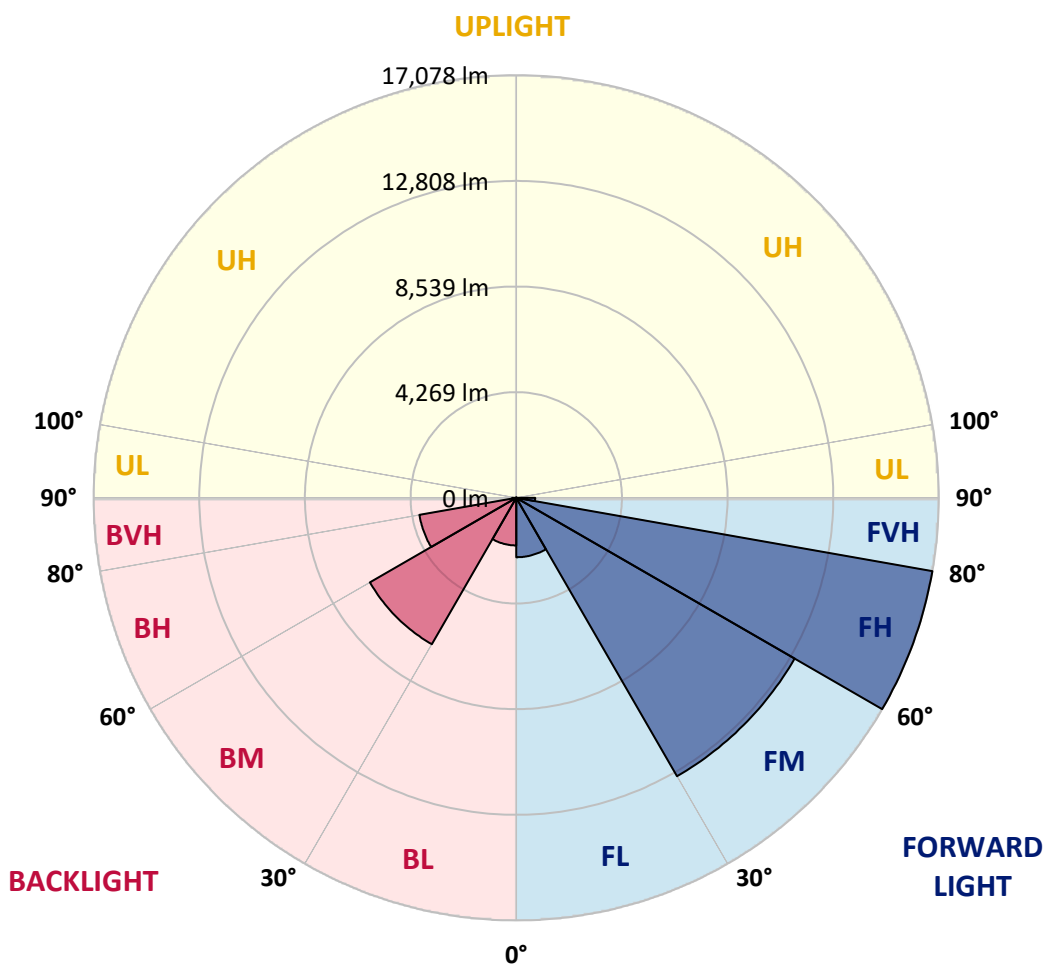


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 CATALOG NUMBER: CTN-CA8-480-730-U-T5R-HSS-HM-EX180

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2402.2	5.2			
FM (30°-60°)	12990.7	28.1			
FH (60°-80°)	17077.8	37.0			G5
FVH (80°-90°)	763.5	1.7			G5
BL (0°-30°)	1924.0	4.2	B3/2500		
BM (30°-60°)	6829.7	14.8	B4/8500		
BH (60°-80°)	3974.0	8.6	B4/5000		G4/5000
BVH (80°-90°)	162.3	0.4			G2/225
UL (90°-100°)	26.3	0.1		U2/50	
UH (100°-180°)	0.4	0.0		U1/10	

**BUG Rating: B4-U2-G5**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6
2.5°	4760.1	4751.2	4742.3	4762.3	4684.5	4717.8	4691.2	4715.6	4697.8	4717.8	4711.2
5°	4822.3	4813.4	4786.8	4809.0	4757.9	4771.2	4737.8	4746.7	4686.7	4722.3	4720.1
7.5°	4924.6	4900.1	4882.4	4882.4	4837.9	4835.7	4782.3	4784.5	4737.8	4733.4	4742.3
10°	5062.4	5044.7	4995.7	5000.2	4937.9	4929.0	4862.3	4860.1	4822.3	4800.1	4820.1
12.5°	5164.7	5182.5	5138.0	5138.0	5075.8	5031.3	4984.6	4953.5	4924.6	4891.2	4875.7
15°	5351.5	5369.3	5309.2	5307.0	5282.5	5229.2	5178.1	5111.4	5060.2	5044.7	5020.2
17.5°	5593.8	5582.7	5531.6	5533.8	5538.2	5451.5	5400.4	5313.7	5240.3	5186.9	5173.6
20°	5840.6	5840.6	5785.0	5802.8	5780.6	5700.5	5667.2	5547.1	5444.8	5387.0	5340.4
22.5°	6116.3	6105.2	6067.4	6105.2	6060.7	5980.7	5925.1	5805.0	5673.8	5347.0	5213.6
25°	6378.6	6372.0	6387.5	6398.6	6343.1	6243.0	6205.2	6078.5	5713.9	5284.8	5015.8
27.5°	6709.9	6687.7	6723.2	6745.5	6689.9	6603.2	6523.1	6380.9	5609.4	5271.4	5242.5
30°	7134.6	7085.6	7136.8	7147.9	7090.1	7036.7	6916.7	6205.2	5644.9	5547.1	5538.2
32.5°	7588.1	7530.3	7597.0	7605.9	7530.3	7485.8	7183.5	6114.1	5994.0	5880.6	5891.7
35°	8126.1	8126.1	8159.5	8163.9	8108.4	8032.8	6881.1	6558.7	6452.0	6347.5	6345.3
37.5°	8782.0	8762.0	8850.9	8904.3	8844.3	8628.6	7321.3	7170.1	7005.6	6872.2	6596.5
40°	9573.5	9609.1	9633.5	9686.9	9629.1	9144.4	7963.8	7792.6	7663.7	7216.8	6520.9
42.5°	10427.3	10436.1	10489.5	10556.2	10556.2	10044.8	8715.3	8568.6	8401.8	7056.7	6743.3
45°	11447.7	11427.7	11530.0	11636.7	11607.8	11078.7	9589.1	9480.1	8699.8	7521.4	7523.6
47.5°	12606.1	12581.6	12728.4	12868.4	12723.9	12225.9	10549.5	10465.0	8397.4	8308.5	8290.7
50°	13944.5	13884.5	14053.4	14240.2	14122.4	13506.5	11716.8	10093.8	9240.0	9168.9	9157.7
52.5°	15374.1	15327.4	15429.7	15747.6	15592.0	14847.2	12821.7	10413.9	10216.0	10136.0	10116.0
55°	16988.2	16897.0	17117.1	17359.5	17179.4	16330.1	13911.2	11476.6	11272.1	11134.3	10934.2
57.5°	18684.6	18553.4	18666.8	18971.4	18798.0	17848.6	15316.3	12570.5	12328.2	10202.7	9391.2
60°	20374.3	20314.2	20358.7	20627.7	20414.3	19324.9	16632.5	13666.6	10433.9	10091.5	10131.6
62.5°	22072.9	21941.7	21981.7	22257.4	21983.9	20730.0	17879.7	14662.6	10980.9	10860.8	10903.0
65°	23893.7	23738.1	23773.7	23853.7	23515.8	21990.6	18982.5	15603.1	11803.5	11676.7	11723.4
67.5°	26088.1	25945.8	25752.4	25514.5	25047.6	23329.0	20078.6	16592.4	12728.4	12657.2	12672.8
68°	26321.6	26183.7	25950.3	25667.9	25143.2	23384.6	20125.3	16621.3	12741.7	12652.8	12657.2
70°	25594.6	25676.8	25412.3	24938.7	24500.7	22570.9	19362.7	15981.0	12174.8	12043.6	12010.2
72.5°	22666.5	22846.6	22482.0	22401.9	21863.9	20107.5	16943.7	13866.7	10589.6	10631.8	10511.7
75°	18299.9	18564.5	18122.1	18146.5	17839.7	16772.5	14200.2	11545.6	8695.3	8888.7	8924.3
77.5°	12726.1	13106.3	12912.9	13106.3	12955.1	12570.5	10989.7	8891.0	6634.3	6856.6	6943.3
80°	6636.5	7087.9	7343.5	7423.6	7472.5	7456.9	6692.1	5335.9	3835.2	3917.4	3913.0
82.5°	2098.8	1989.8	2054.3	2036.5	1981.0	2003.2	1805.3	1411.8	978.2	1078.3	1031.6
85°	633.6	638.1	620.3	615.9	569.2	500.2	409.1	235.7	115.6	135.6	126.7
87.5°	466.9	471.3	435.8	413.5	386.9	335.7	260.1	146.7	55.6	53.4	42.2
90°	257.9	249.0	231.2	213.4	202.3	173.4	131.2	55.6	20.0	15.6	13.3
92.5°	140.1	133.4	124.5	117.8	102.3	82.3	53.4	17.8	8.9	2.2	0.0
95°	64.5	60.0	57.8	51.1	44.5	31.1	17.8	11.1	6.7	2.2	0.0
97.5°	28.9	26.7	24.5	20.0	15.6	8.9	8.9	6.7	4.4	2.2	0.0
100°	6.7	6.7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	2.2	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0



REPORT NUMBER: P522241  
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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6	4675.6
2.5°	4704.5	4691.2	4684.5	4642.2	4655.6	4617.8	4691.2	4673.4	4662.2	4693.4
5°	4708.9	4662.2	4691.2	4666.7	4675.6	4622.2	4680.0	4655.6	4653.4	4666.7
7.5°	4720.1	4688.9	4717.8	4668.9	4691.2	4668.9	4711.2	4686.7	4706.7	4720.1
10°	4780.1	4762.3	4749.0	4737.8	4753.4	4708.9	4762.3	4764.5	4771.2	4811.2
12.5°	4864.6	4846.8	4824.5	4795.6	4811.2	4793.4	4833.4	4844.6	4869.0	4889.0
15°	4982.4	4949.1	4940.2	4913.5	4929.0	4920.2	4929.0	4922.4	4969.1	4962.4
17.5°	5144.7	5106.9	4980.2	4851.2	4769.0	4793.4	4895.7	5029.1	5062.4	5066.9
20°	5204.7	4937.9	4924.6	4777.9	4711.2	4706.7	4495.5	4179.8	4275.4	4499.9
22.5°	5133.6	4769.0	4731.2	4702.3	4417.7	3950.8	3906.3	3859.6	3848.5	3881.9
25°	4973.5	4931.3	4897.9	4520.0	4070.9	4073.1	4008.6	3701.8	3223.8	3183.8
27.5°	5218.1	5160.3	4837.9	4255.4	4246.5	4242.0	4146.4	3359.4	3257.1	3281.6
30°	5496.0	5400.4	4557.8	4482.2	4479.9	4439.9	3717.3	3388.3	3388.3	3392.7
32.5°	5816.1	5222.5	4717.8	4753.4	4751.2	4562.2	3590.6	3568.4	3559.5	3581.7
35°	6060.7	5080.2	5062.4	5126.9	5082.5	3870.8	3815.2	3795.2	3786.3	3775.2
37.5°	5985.1	5489.3	5489.3	5529.3	5171.4	4122.0	4095.3	4095.3	4077.5	4068.6
40°	6100.7	5998.4	5947.3	5962.9	3757.4	4426.6	4446.6	4442.1	4439.9	4455.5
42.5°	6709.9	6618.7	6572.1	6020.7	4206.5	4399.9	4889.0	4886.8	4893.5	4886.8
45°	7485.8	7401.3	7279.1	5633.8	4775.6	3857.4	5389.3	5413.7	5415.9	5413.7
47.5°	8299.6	8246.2	6994.5	6236.3	5393.7	4139.8	5151.4	6016.2	6005.1	6018.5
50°	9160.0	8919.9	6958.9	6950.0	6051.8	4606.7	4608.9	6543.2	6656.5	6692.1
52.5°	10118.2	8086.1	7712.6	7036.7	6718.8	5086.9	5038.0	5798.4	7345.8	7381.3
55°	9397.9	8541.9	8535.2	6263.0	6990.0	5549.3	5556.0	5502.7	6736.6	7657.0
57.5°	9351.2	9371.2	9355.6	6987.8	5100.2	5202.5	6054.0	6007.3	4362.1	3535.0
60°	10158.2	10187.1	9088.8	7545.9	5513.8	3199.3	3728.5	3168.2	3210.4	3243.8
62.5°	10929.7	10938.6	7392.5	4946.8	2732.4	129.0	62.3	51.1	48.9	48.9
65°	11783.5	11783.5	7923.8	5395.9	2639.1	48.9	8.9	6.7	24.5	24.5
67.5°	12608.3	12426.0	8312.9	5729.4	2685.7	6.7	0.0	0.0	0.0	0.0
68°	12561.6	12361.5	8277.3	5720.5	2679.1	4.4	0.0	0.0	0.0	0.0
70°	11863.5	11670.1	7852.7	5460.4	2579.0	4.4	0.0	0.0	0.0	0.0
72.5°	10471.7	10293.9	6954.5	4813.4	2325.6	2.2	0.0	0.0	0.0	0.0
75°	8864.3	8839.8	6007.3	4062.0	1994.3	2.2	0.0	0.0	0.0	0.0
77.5°	7132.3	7021.2	4695.6	3183.8	1607.4	0.0	0.0	0.0	0.0	0.0
80°	3973.0	4137.6	2748.0	1872.0	1011.6	0.0	0.0	0.0	0.0	0.0
82.5°	1073.9	1004.9	600.3	406.9	193.4	0.0	0.0	0.0	0.0	0.0
85°	137.8	151.2	68.9	55.6	13.3	0.0	0.0	0.0	0.0	0.0
87.5°	71.1	84.5	22.2	17.8	4.4	0.0	0.0	0.0	0.0	0.0
90°	13.3	15.6	6.7	2.2	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P522241  
 CATALOG NUMBER: CTN-CA8-480-730-U-T5R-HSS-HM-EX180

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)