

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: INVUE

Report Number: P411969

Luminaire Tested: **CPB-VA1-42-740-U-AS**

Issue Date: 9/23/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P411969  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2009-963-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 9/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CPB-VA1-42-740-U-AS  
Description: CLEARPATH BOLLARD LUMINAIRE  
4000K, 70 CRI LEDS WITH ASYMMETRIC SINGLE SIDE LIGHTGUIDE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 875.1 lumens  
Efficiency: N/A  
Efficacy: 38.6 lumens/watt  
Luminous Opening: (L: 0 ' x W: 0.33 ' x H: 1.79 '  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B0 - U3 - G2

Input Watts (W): 22.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 28.75 FT

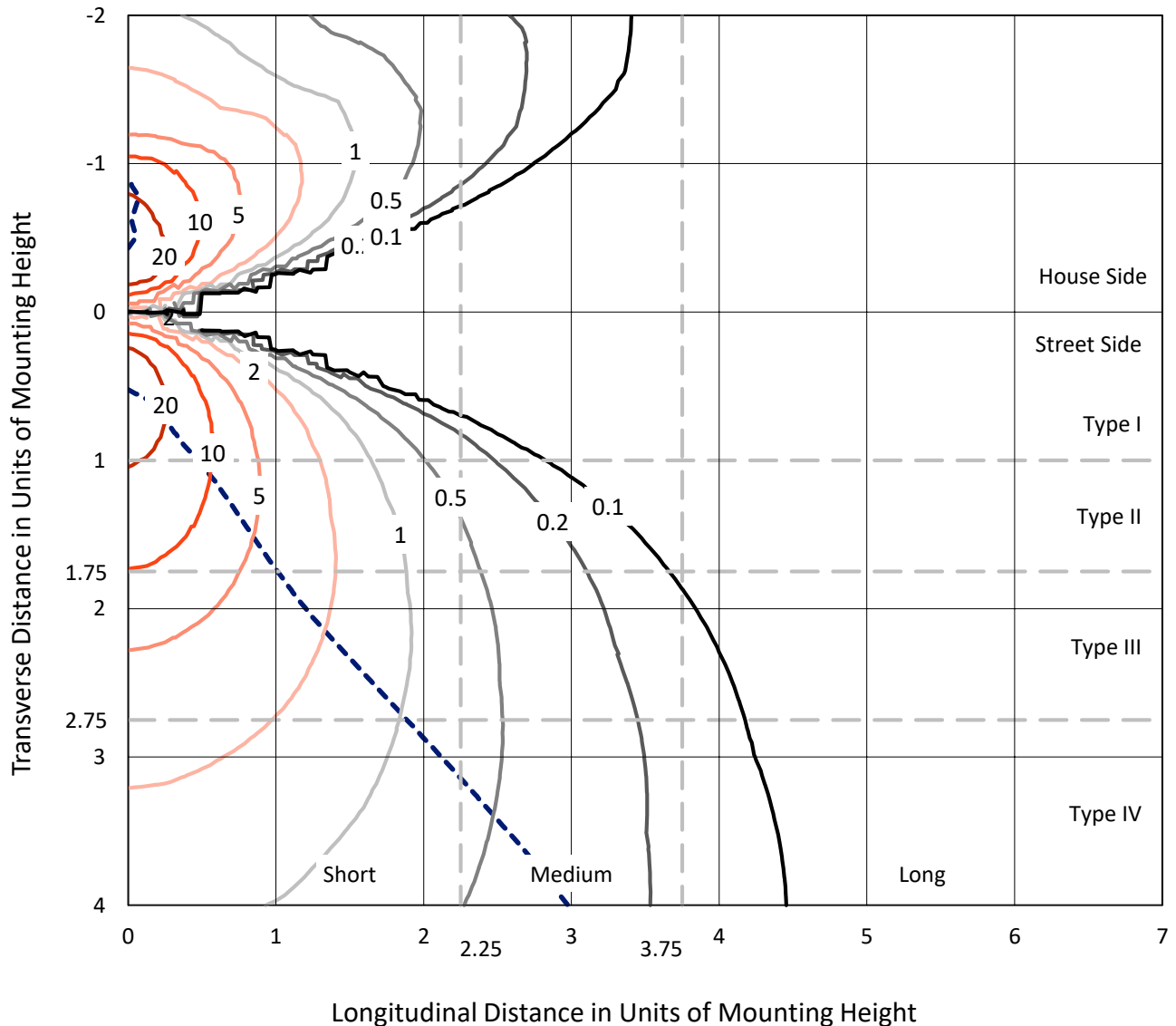


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

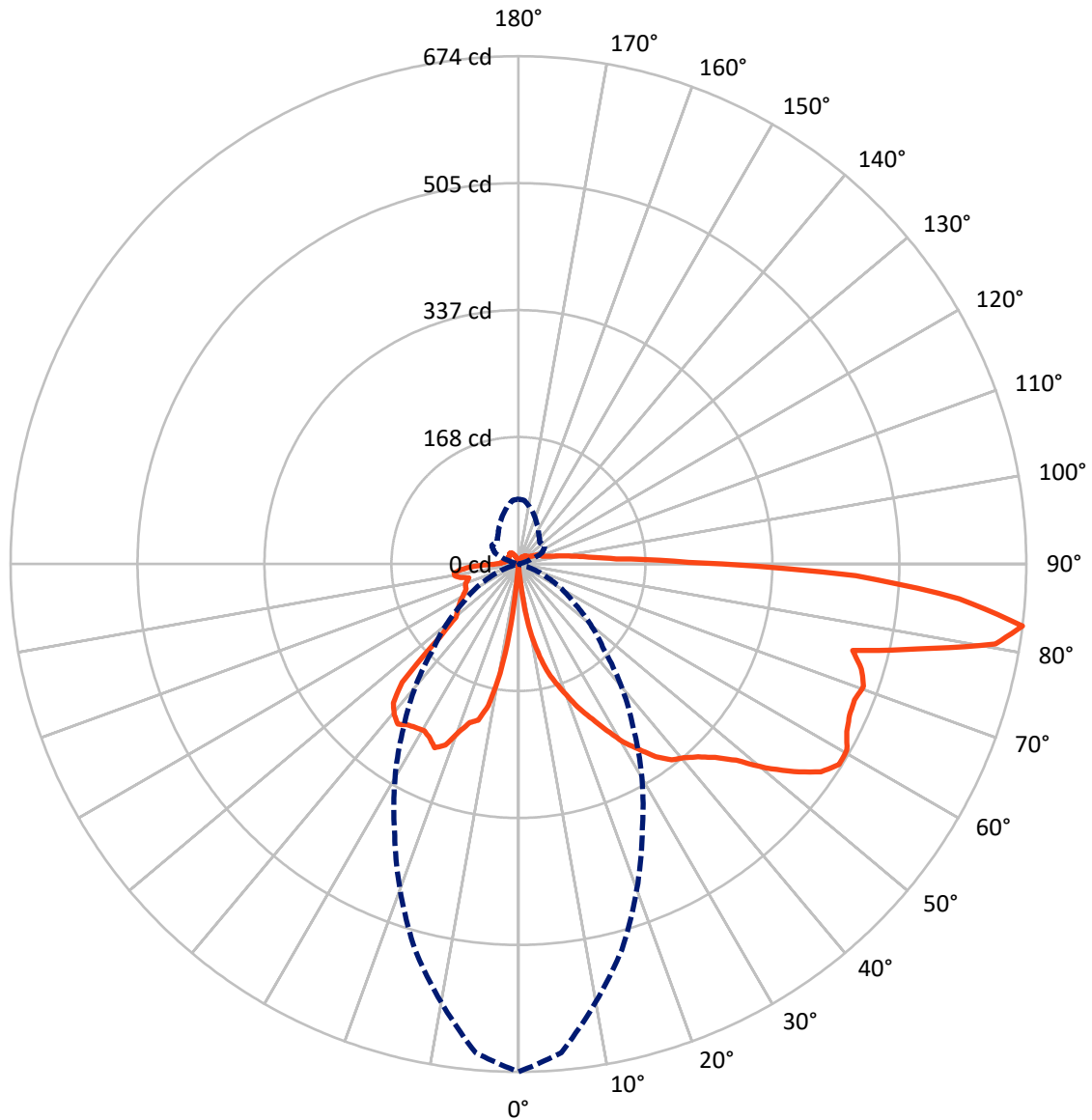


Based on 2.5 foot mounting height. Maximum calculated value = 31.7 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 82.5-Deg Vertical



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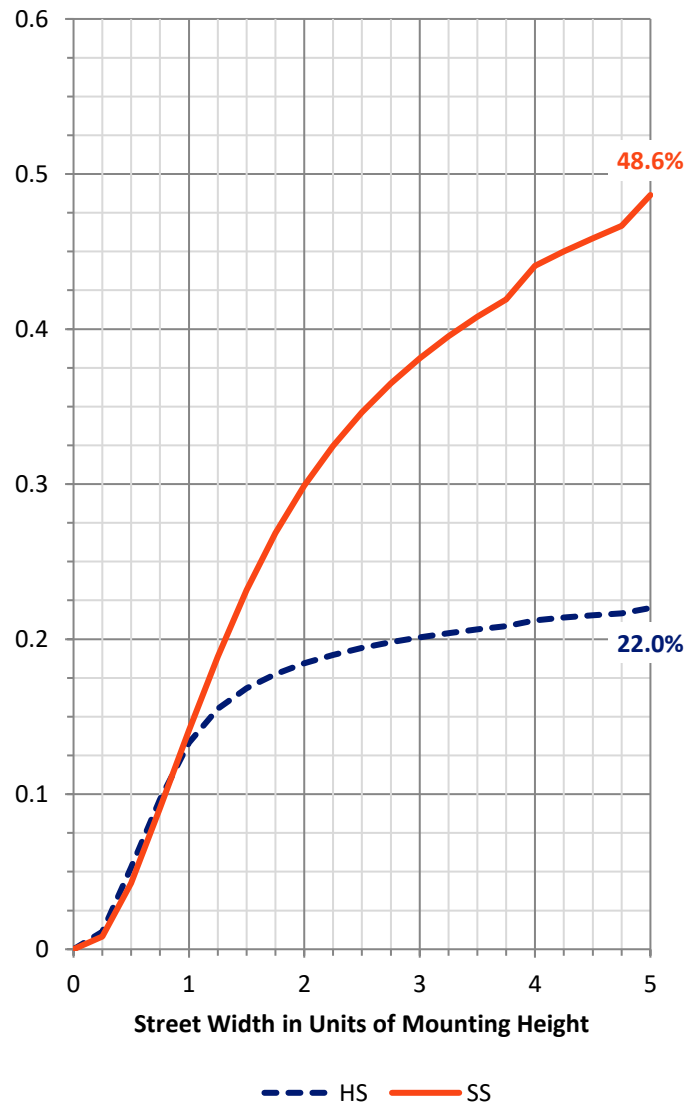
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	208.1	55.6	263.6
	% Fixture	23.8	6.3	30.1
<b>Street Side</b>	Lumens	518.8	92.7	611.5
	% Fixture	59.3	10.6	69.9
<b>Total</b>	Lumens	726.9	148.2	875.1
	% Fixture	83.1	16.9	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2.1	0.2
10°-20°	23.9	2.7
20°-30°	50.2	5.7
30°-40°	74.3	8.5
40°-50°	93.5	10.7
50°-60°	105.3	12.0
60°-70°	113.8	13.0
70°-80°	131.4	15.0
80°-90°	132.4	15.1
90°-100°	57.3	6.5
100°-110°	28.9	3.3
110°-120°	20.6	2.4
120°-130°	15.8	1.8
130°-140°	12.1	1.4
140°-150°	8.0	0.9
150°-160°	4.0	0.5
160°-170°	1.4	0.2
170°-180°	0.2	0.0
0°-90°	726.9	83.1
0°-180°	875.1	100.0



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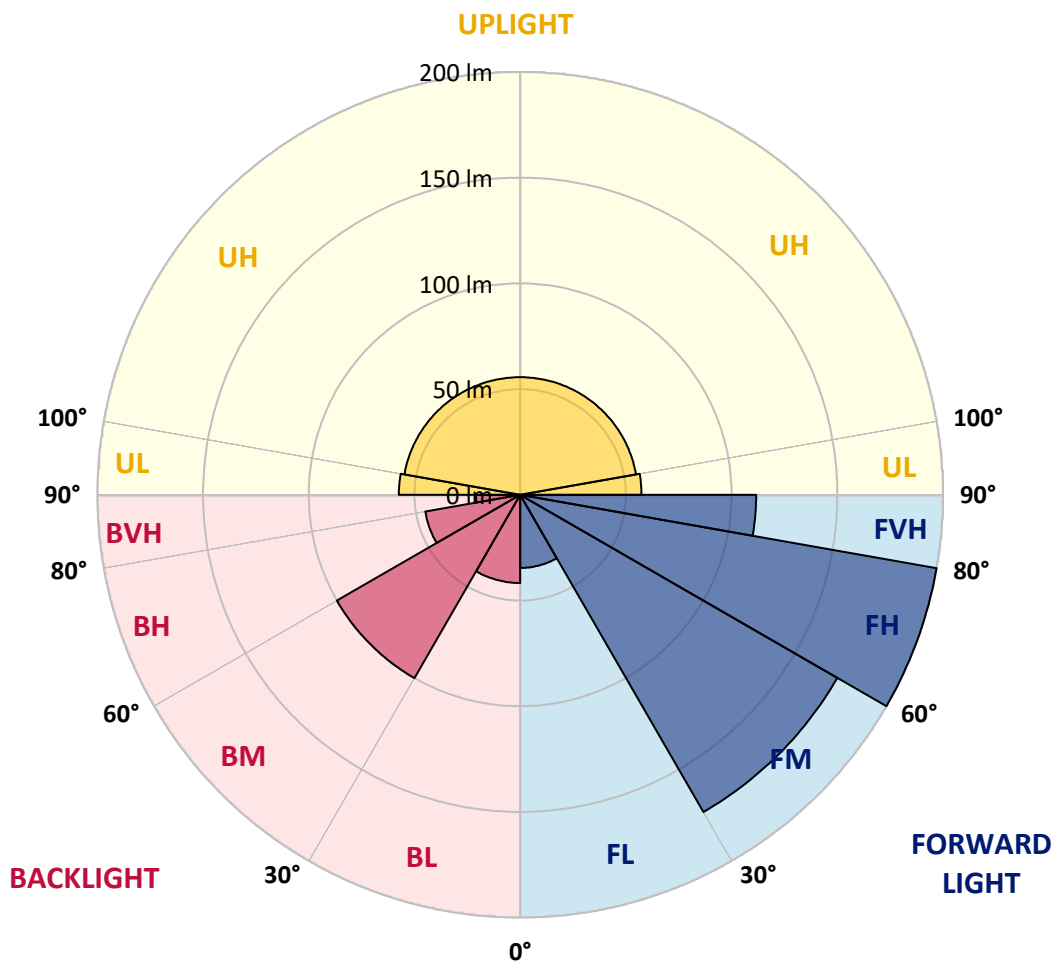
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	34.6	3.9			
FM	(30°-60°)	173.0	19.8			
FH	(60°-80°)	199.7	22.8			G0/660
FVH	(80°-90°)	111.5	12.7			G2/225
BL	(0°-30°)	41.7	4.8	B0/110		
BM	(30°-60°)	100.0	11.4	B0/220		
BH	(60°-80°)	45.5	5.2	B0/110		G0/110
BVH	(80°-90°)	20.9	2.4			G1/100
UL	(90°-100°)	57.3	6.5		U3/500	
UH	(100°-180°)	55.6	6.3		U3/500	

**BUG Rating: B0-U3-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	61.0	59.0	54.0	45.0	35.0	17.0	2.0	0.0	0.0	0.0	0.0
10°	97.0	97.0	90.0	79.0	66.0	41.0	19.0	2.0	0.0	0.0	0.0
12.5°	125.9	124.9	117.9	105.9	89.0	59.0	30.0	6.0	0.0	0.0	0.0
15°	150.9	148.9	140.9	125.9	105.9	72.0	38.0	10.0	0.0	0.0	0.0
17.5°	168.9	167.9	157.9	138.9	116.9	80.0	44.0	14.0	0.0	0.0	0.0
20°	187.9	185.9	171.9	149.9	123.9	86.0	49.0	17.0	0.0	0.0	0.0
22.5°	208.9	205.9	188.9	160.9	130.9	90.0	52.0	19.0	0.0	0.0	0.0
25°	227.9	225.9	203.9	172.9	137.9	94.0	55.0	22.0	1.0	0.0	0.0
27.5°	249.9	244.9	219.9	182.9	143.9	97.0	58.0	24.0	1.0	0.0	0.0
30°	273.9	267.9	234.9	190.9	148.9	98.9	60.0	25.0	1.0	0.0	0.0
32.5°	292.8	287.9	248.9	198.9	152.9	101.9	61.0	27.0	1.0	0.0	0.0
35°	313.8	306.8	263.9	206.9	156.9	103.9	63.0	28.0	1.0	0.0	0.0
37.5°	329.8	321.8	276.9	214.9	160.9	106.9	64.0	29.0	1.0	0.0	0.0
40°	337.8	331.8	284.9	221.9	164.9	108.9	66.0	30.0	1.0	0.0	0.0
42.5°	349.8	341.8	295.8	228.9	169.9	111.9	67.0	31.0	1.0	0.0	0.0
45°	365.8	358.8	309.8	237.9	173.9	113.9	68.0	32.0	1.0	0.0	0.0
47.5°	388.8	381.8	327.8	247.9	177.9	114.9	70.0	33.0	1.0	0.0	0.0
50°	424.8	411.8	348.8	258.9	182.9	116.9	71.0	34.0	1.0	1.0	1.0
52.5°	457.8	448.8	368.8	269.9	187.9	118.9	72.0	35.0	1.0	1.0	1.0
55°	486.8	474.8	385.8	276.9	191.9	119.9	73.0	36.0	1.0	1.0	1.0
57.5°	501.7	486.8	394.8	282.9	194.9	122.9	74.0	37.0	1.0	1.0	1.0
60°	500.7	486.8	397.8	288.9	197.9	125.9	76.0	38.0	1.0	1.0	1.0
62.5°	488.7	476.8	397.8	292.8	202.9	128.9	78.0	39.0	1.0	1.0	1.0
65°	482.8	471.8	397.8	297.8	209.9	133.9	80.0	40.0	1.0	1.0	1.0
67.5°	480.8	470.8	397.8	301.8	219.9	139.9	84.0	41.0	2.0	1.0	1.0
70°	485.8	473.8	395.8	316.8	229.9	146.9	86.0	41.0	1.0	1.0	1.0
72.5°	475.8	464.8	402.8	336.8	240.9	153.9	88.0	42.0	2.0	1.0	1.0
75°	457.8	455.8	436.8	357.8	253.9	158.9	90.0	43.0	2.0	1.0	1.0
77.5°	541.7	542.7	490.7	375.8	265.9	161.9	90.0	43.0	2.0	1.0	1.0
80°	641.7	634.7	527.7	391.8	270.9	161.9	91.0	43.0	2.0	1.0	1.0
82.5°	673.7	650.7	529.7	388.8	265.9	159.9	90.0	43.0	2.0	1.0	1.0
85°	586.7	575.7	480.8	356.8	249.9	155.9	87.0	42.0	2.0	1.0	1.0
87.5°	447.8	437.8	375.8	300.8	226.9	145.9	84.0	42.0	2.0	1.0	1.0
90°	225.9	233.9	253.9	238.9	196.9	133.9	79.0	41.0	2.0	1.0	1.0
92.5°	129.9	131.9	163.9	181.9	165.9	117.9	74.0	39.0	2.0	1.0	1.0
95°	94.0	95.0	108.9	132.9	134.9	103.9	68.0	38.0	2.0	1.0	1.0
97.5°	74.0	74.0	77.0	96.0	106.9	90.0	62.0	37.0	2.0	1.0	1.0
100°	58.0	58.0	58.0	69.0	83.0	76.0	56.0	35.0	2.0	1.0	1.0
102.5°	46.0	46.0	46.0	52.0	63.0	63.0	51.0	34.0	2.0	1.0	1.0
105°	38.0	38.0	39.0	42.0	50.0	52.0	46.0	32.0	1.0	1.0	1.0
107.5°	34.0	34.0	35.0	37.0	41.0	44.0	41.0	31.0	2.0	1.0	1.0
110°	32.0	33.0	33.0	34.0	36.0	38.0	38.0	29.0	2.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	31.0	31.0	31.0	31.0	32.0	34.0	34.0	28.0	1.0	1.0	1.0
115°	28.0	29.0	28.0	28.0	28.0	31.0	32.0	27.0	1.0	1.0	1.0
117.5°	24.0	25.0	25.0	25.0	26.0	28.0	29.0	25.0	1.0	1.0	1.0
120°	21.0	21.0	22.0	23.0	24.0	26.0	28.0	24.0	1.0	1.0	1.0
122.5°	18.0	19.0	20.0	21.0	23.0	25.0	26.0	23.0	1.0	1.0	1.0
125°	17.0	17.0	19.0	20.0	21.0	23.0	25.0	21.0	1.0	1.0	1.0
127.5°	16.0	17.0	18.0	19.0	21.0	22.0	23.0	20.0	1.0	1.0	1.0
130°	16.0	16.0	17.0	18.0	20.0	21.0	22.0	19.0	1.0	1.0	1.0
132.5°	15.0	15.0	16.0	18.0	19.0	20.0	21.0	18.0	1.0	1.0	1.0
135°	14.0	14.0	15.0	17.0	18.0	19.0	19.0	16.0	1.0	1.0	1.0
137.5°	14.0	14.0	15.0	16.0	17.0	18.0	18.0	15.0	1.0	1.0	1.0
140°	13.0	13.0	14.0	15.0	16.0	17.0	17.0	13.0	1.0	1.0	1.0
142.5°	13.0	13.0	14.0	15.0	15.0	16.0	15.0	12.0	1.0	1.0	1.0
145°	12.0	12.0	13.0	14.0	14.0	15.0	14.0	11.0	1.0	1.0	1.0
147.5°	11.0	12.0	12.0	13.0	13.0	13.0	13.0	10.0	1.0	1.0	1.0
150°	11.0	11.0	11.0	12.0	12.0	12.0	11.0	8.0	1.0	1.0	1.0
152.5°	10.0	10.0	11.0	11.0	11.0	11.0	10.0	7.0	1.0	1.0	1.0
155°	9.0	9.0	10.0	10.0	10.0	10.0	9.0	6.0	1.0	1.0	1.0
157.5°	8.0	8.0	9.0	9.0	9.0	9.0	8.0	5.0	1.0	1.0	1.0
160°	7.0	7.0	8.0	8.0	8.0	7.0	6.0	4.0	1.0	1.0	1.0
162.5°	7.0	7.0	7.0	7.0	7.0	6.0	5.0	3.0	1.0	1.0	1.0
165°	6.0	6.0	6.0	6.0	6.0	5.0	4.0	3.0	1.0	2.0	2.0
167.5°	5.0	5.0	5.0	5.0	5.0	4.0	3.0	2.0	2.0	2.0	2.0
170°	4.0	4.0	4.0	4.0	4.0	3.0	2.0	2.0	2.0	2.0	2.0
172.5°	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
175°	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.0	3.0
177.5°	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	2.0	3.0	3.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	2.0	4.0	4.0	3.0	3.0
7.5°	0.0	0.0	0.0	5.0	22.0	46.0	62.0	72.0	79.0	81.0
10°	0.0	0.0	4.0	25.0	55.0	92.0	116.9	136.9	144.9	146.9
12.5°	0.0	0.0	8.0	39.0	84.0	132.9	159.9	179.9	190.9	191.9
15°	0.0	1.0	13.0	51.0	103.9	153.9	180.9	201.9	212.9	213.9
17.5°	0.0	1.0	17.0	59.0	110.9	158.9	183.9	204.9	217.9	219.9
20°	0.0	0.0	20.0	63.0	110.9	153.9	181.9	210.9	231.9	235.9
22.5°	0.0	1.0	23.0	65.0	107.9	153.9	191.9	229.9	254.9	258.9
25°	0.0	1.0	26.0	66.0	107.9	159.9	198.9	235.9	262.9	267.9
27.5°	0.0	1.0	28.0	67.0	110.9	158.9	194.9	229.9	254.9	258.9
30°	0.0	1.0	29.0	69.0	109.9	153.9	185.9	219.9	248.9	253.9
32.5°	0.0	1.0	31.0	69.0	107.9	146.9	177.9	216.9	249.9	255.9
35°	0.0	1.0	32.0	69.0	105.9	141.9	173.9	215.9	252.9	258.9
37.5°	0.0	1.0	33.0	69.0	103.9	139.9	171.9	215.9	255.9	265.9
40°	0.0	1.0	34.0	69.0	102.9	137.9	169.9	211.9	251.9	258.9
42.5°	0.0	1.0	35.0	69.0	101.9	135.9	163.9	202.9	241.9	247.9
45°	0.0	1.0	35.0	69.0	100.9	131.9	156.9	190.9	218.9	219.9
47.5°	0.0	1.0	36.0	69.0	98.9	125.9	147.9	160.9	148.9	141.9
50°	1.0	1.0	36.0	68.0	96.0	120.9	131.9	109.9	108.9	108.9
52.5°	1.0	1.0	37.0	67.0	93.0	112.9	103.9	93.0	100.9	102.9
55°	1.0	1.0	37.0	66.0	89.0	101.9	80.0	86.0	96.0	97.0
57.5°	1.0	1.0	37.0	65.0	85.0	86.0	70.0	80.0	90.0	92.0
60°	1.0	1.0	37.0	63.0	79.0	69.0	64.0	75.0	85.0	86.0
62.5°	1.0	1.0	37.0	61.0	73.0	57.0	60.0	70.0	79.0	81.0
65°	1.0	1.0	37.0	59.0	65.0	52.0	57.0	67.0	76.0	77.0
67.5°	1.0	1.0	37.0	56.0	58.0	49.0	56.0	66.0	75.0	76.0
70°	1.0	1.0	36.0	54.0	52.0	48.0	56.0	64.0	73.0	75.0
72.5°	1.0	1.0	35.0	51.0	48.0	48.0	57.0	64.0	70.0	71.0
75°	1.0	2.0	35.0	49.0	45.0	49.0	58.0	67.0	69.0	68.0
77.5°	1.0	1.0	35.0	47.0	43.0	49.0	59.0	71.0	78.0	79.0
80°	1.0	2.0	34.0	45.0	41.0	48.0	59.0	74.0	85.0	86.0
82.5°	1.0	2.0	34.0	43.0	40.0	47.0	58.0	72.0	85.0	86.0
85°	1.0	2.0	34.0	41.0	39.0	45.0	53.0	66.0	75.0	76.0
87.5°	1.0	1.0	33.0	40.0	38.0	42.0	47.0	53.0	59.0	59.0
90°	1.0	1.0	32.0	38.0	36.0	39.0	40.0	40.0	36.0	32.0
92.5°	1.0	1.0	32.0	37.0	35.0	35.0	34.0	31.0	26.0	25.0
95°	1.0	1.0	31.0	36.0	33.0	32.0	29.0	25.0	22.0	22.0
97.5°	1.0	1.0	31.0	35.0	32.0	30.0	25.0	22.0	20.0	20.0
100°	1.0	1.0	30.0	34.0	31.0	27.0	23.0	20.0	18.0	18.0
102.5°	1.0	1.0	29.0	34.0	30.0	26.0	22.0	19.0	17.0	17.0
105°	1.0	1.0	29.0	33.0	30.0	25.0	21.0	18.0	16.0	16.0
107.5°	1.0	1.0	28.0	33.0	29.0	24.0	21.0	18.0	16.0	15.0
110°	1.0	1.0	27.0	33.0	29.0	24.0	21.0	18.0	16.0	15.0



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CATALOG NUMBER: CPB-VA1-42-740-U-AS

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	1.0	1.0	26.0	32.0	29.0	25.0	21.0	18.0	15.0	15.0
115°	1.0	1.0	26.0	32.0	30.0	25.0	21.0	18.0	15.0	15.0
117.5°	1.0	1.0	25.0	32.0	30.0	25.0	21.0	18.0	15.0	15.0
120°	1.0	1.0	24.0	31.0	30.0	26.0	22.0	18.0	16.0	15.0
122.5°	1.0	1.0	23.0	31.0	30.0	26.0	22.0	19.0	16.0	15.0
125°	1.0	1.0	21.0	30.0	30.0	27.0	22.0	19.0	16.0	16.0
127.5°	1.0	1.0	20.0	29.0	30.0	27.0	23.0	19.0	16.0	16.0
130°	1.0	1.0	19.0	28.0	30.0	27.0	23.0	19.0	17.0	16.0
132.5°	1.0	1.0	18.0	26.0	29.0	28.0	24.0	20.0	17.0	16.0
135°	1.0	1.0	16.0	25.0	28.0	27.0	24.0	20.0	17.0	17.0
137.5°	1.0	1.0	15.0	23.0	27.0	26.0	24.0	20.0	18.0	17.0
140°	1.0	1.0	13.0	21.0	25.0	25.0	23.0	21.0	18.0	18.0
142.5°	1.0	1.0	12.0	19.0	23.0	24.0	23.0	20.0	18.0	18.0
145°	1.0	1.0	10.0	18.0	21.0	23.0	22.0	20.0	18.0	18.0
147.5°	1.0	1.0	9.0	16.0	19.0	21.0	20.0	19.0	18.0	17.0
150°	1.0	1.0	8.0	14.0	17.0	18.0	19.0	18.0	17.0	17.0
152.5°	1.0	1.0	6.0	12.0	15.0	16.0	17.0	16.0	16.0	15.0
155°	1.0	1.0	5.0	10.0	13.0	14.0	14.0	14.0	14.0	14.0
157.5°	1.0	1.0	4.0	9.0	11.0	12.0	13.0	12.0	12.0	12.0
160°	1.0	1.0	3.0	7.0	9.0	10.0	11.0	11.0	11.0	11.0
162.5°	1.0	1.0	2.0	5.0	7.0	9.0	9.0	9.0	9.0	9.0
165°	2.0	1.0	2.0	4.0	6.0	7.0	7.0	8.0	8.0	8.0
167.5°	2.0	2.0	2.0	3.0	4.0	5.0	6.0	6.0	6.0	6.0
170°	2.0	2.0	2.0	2.0	2.0	3.0	4.0	4.0	4.0	4.0
172.5°	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
175°	3.0	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
177.5°	3.0	2.0	2.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

(END OF REPORT)