

Scaled data based on original data using  
LM-31-95 IESNA Approved Method for Photometric Testing of Roadway Luminaires  
Using Incandescent Filament and High Intensity Discharge Lamps

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: LUMIERE

Report Number: P10070

Luminaire Tested: **1237L-RD-x-20T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-31-95  
Report Number: P10070  
Test Lab: PEACHTREE CITY  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMIERE  
Catalog Number: 1237L-RD-x-20T3  
Description: LUMIERE 7 INCH INCANDESCENT STEP LIGHT  
WITH LOUVER FACEPLATE, CLEAR LENS  
WITH REFLECTOR  
Light Source: BI PIN T3 CLEAR QUARTZ HALOGEN INCANDESCENT LAMP  
Q20T3/CL/CD 20WATTS  
Ballast/Driver: -

**Summary**

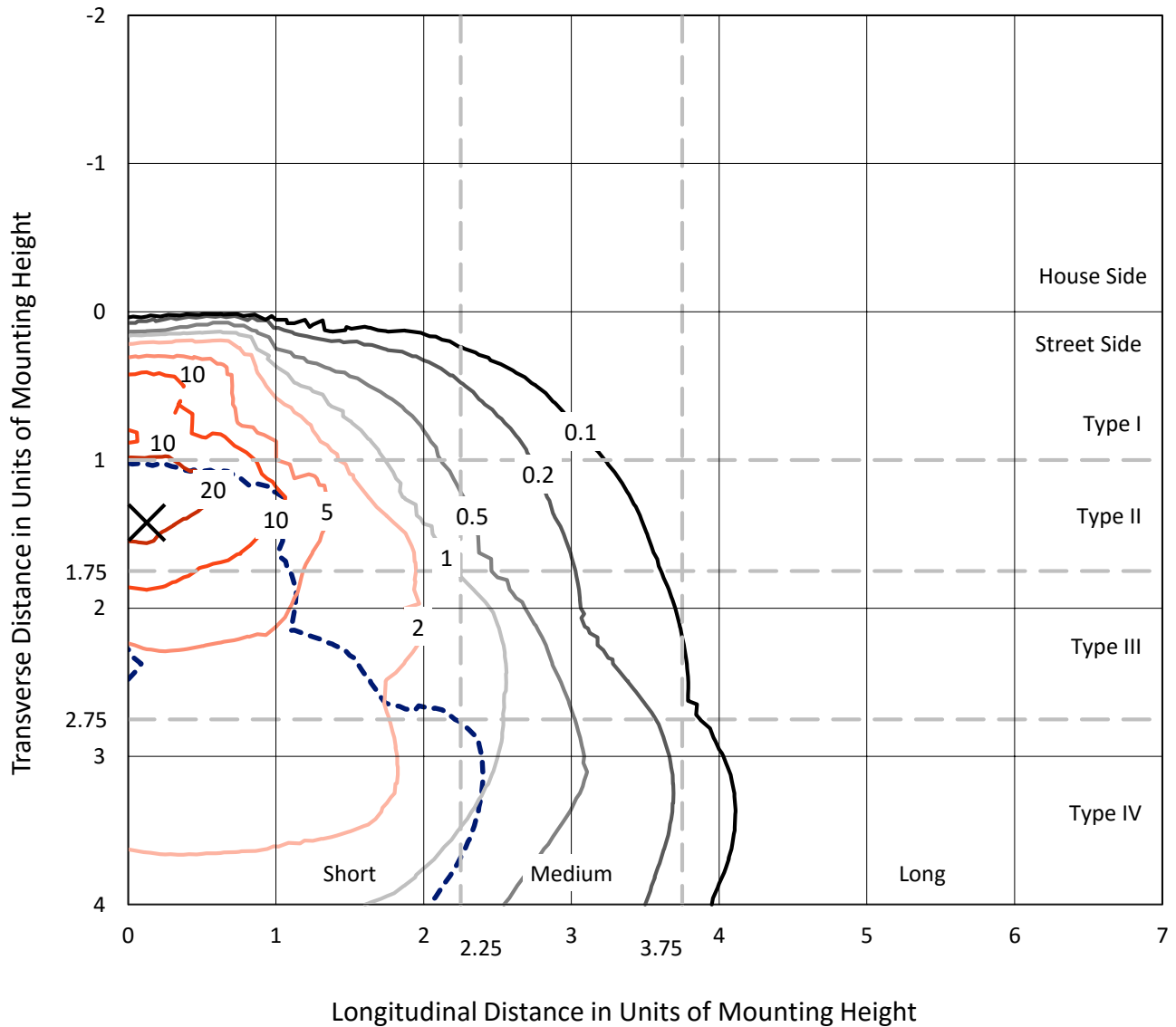
Lumens per Lamp: 350 (1 lamp)  
Luminaire Lumens: 23.5 lumens  
Efficiency: 6.7%  
Efficacy: 1.2 lumens/watt  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
IES Classification: Type IV - Short - Cutoff  
BUG Rating: B0 - U1 - G0

Input Watts (W): 20  
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

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### Iso-Footcandle Lines of Horizontal Illumination

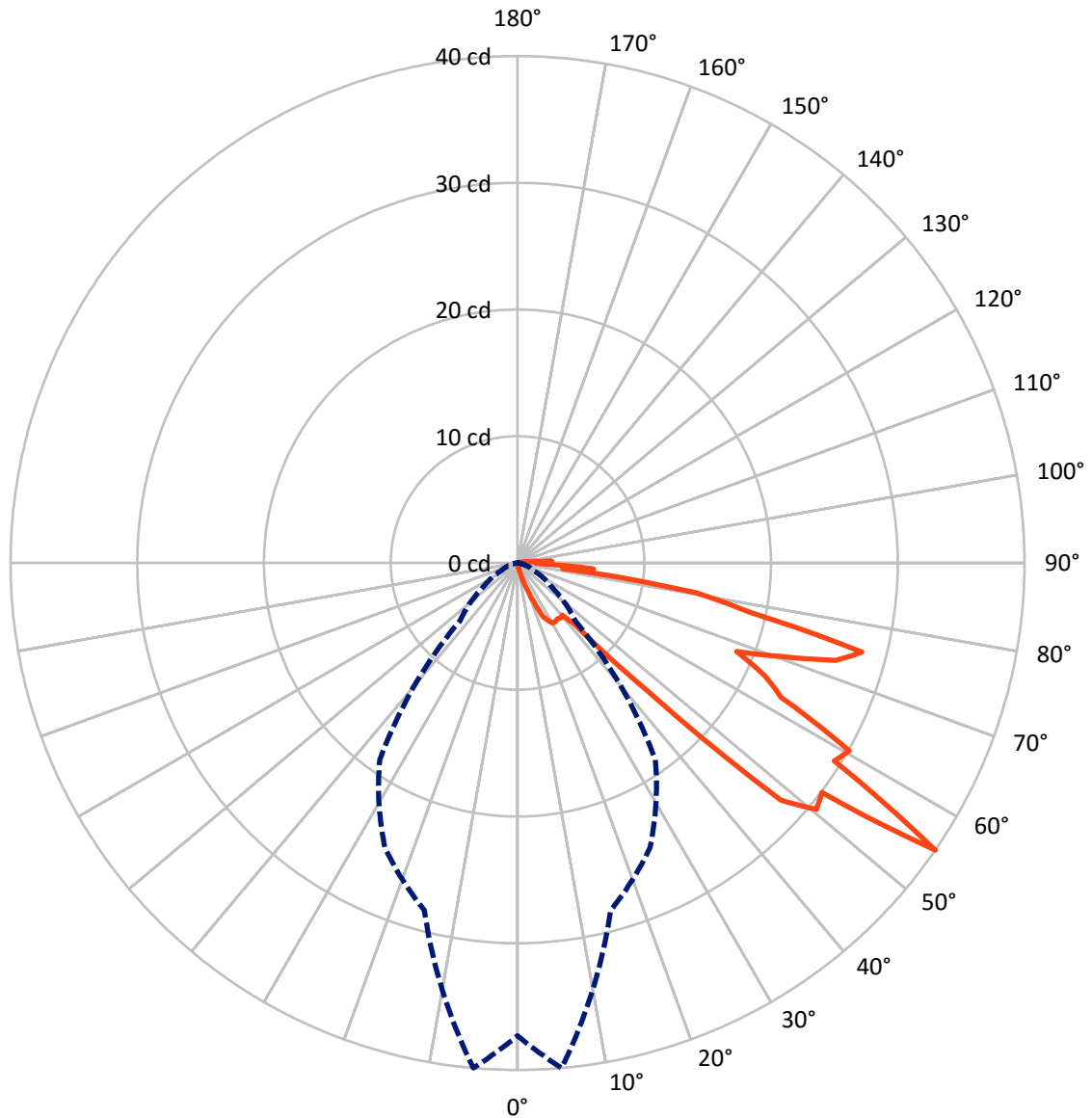
✕ Max cd  
 - - - 1/2 Max cd



Based on 0.5 foot mounting height. Maximum calculated value = 36.6 fc  
 Type IV - Short - Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral      - - - Horizontal Cone Through 55-Deg Vertical

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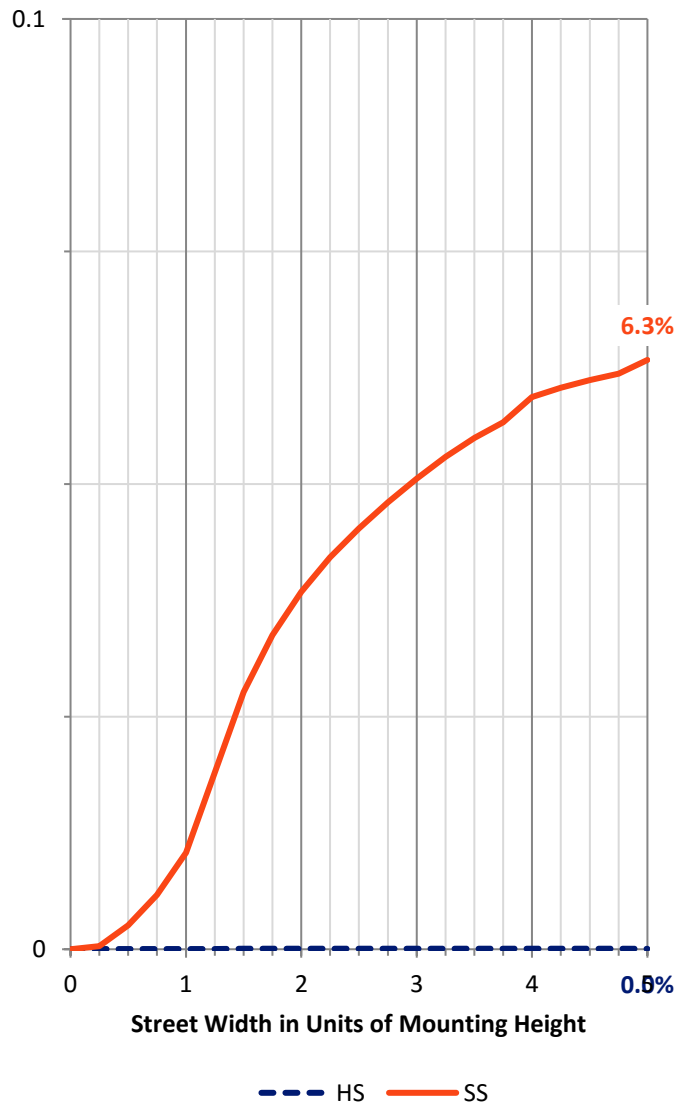
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	0.0	0.0	0.0
	% Lamp	0.0	0.0	0.0
<b>Street Side</b>	Lumens	22.8	0.6	23.4
	% Lamp	6.5	0.2	6.7
<b>Total</b>	Lumens	22.9	0.6	23.5
	% Lamp	6.5	0.2	6.7

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.0	0.0	0.0
10°-20°	0.1	0.3	0.0
20°-30°	0.5	2.1	0.1
30°-40°	1.0	4.3	0.3
40°-50°	2.5	10.5	0.7
50°-60°	5.7	24.3	1.6
60°-70°	5.6	23.8	1.6
70°-80°	6.1	26.1	1.8
80°-90°	1.4	6.0	0.4
90°-100°	0.4	1.9	0.1
100°-110°	0.1	0.3	0.0
110°-120°	0.0	0.2	0.0
120°-130°	0.0	0.1	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	22.9	97.4	6.5
0°-180°	23.5	100.0	6.7

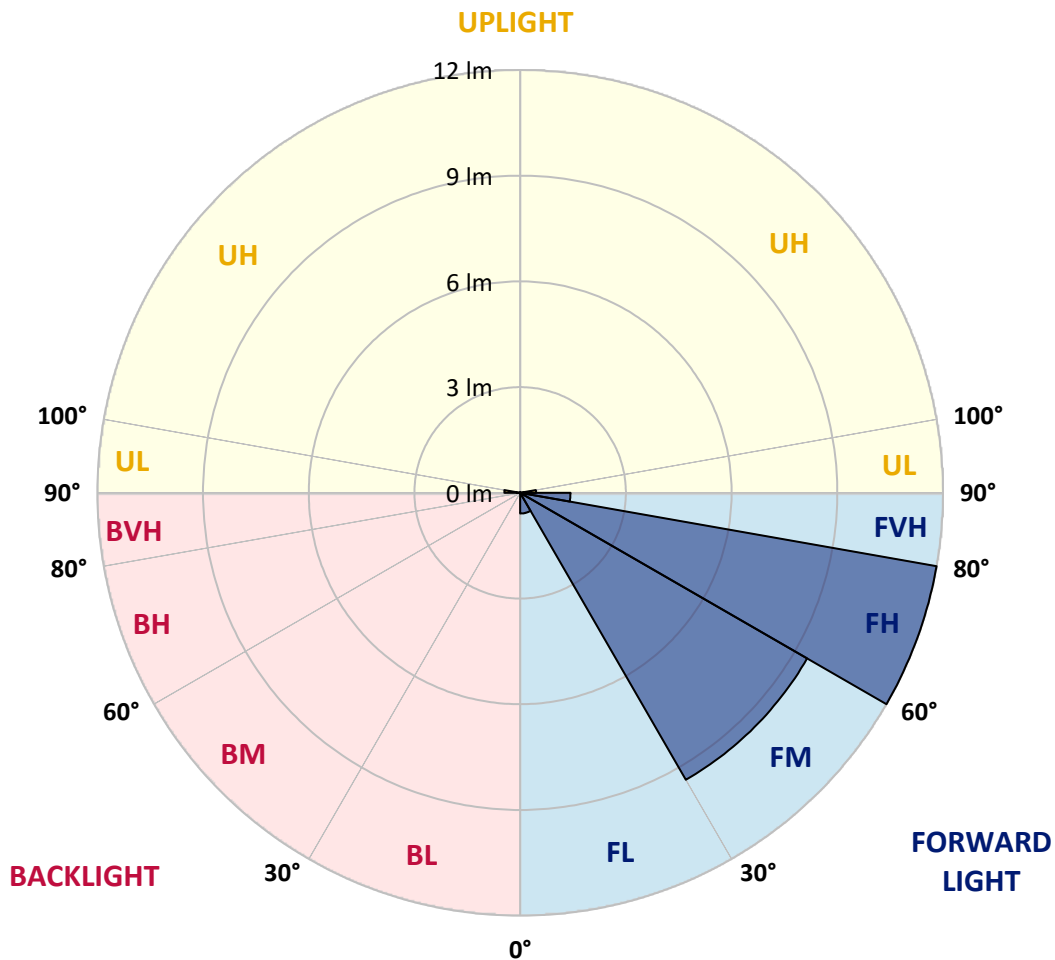


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	0.6	0.2			
FM (30°-60°)	9.2	2.6			
FH (60°-80°)	11.7	3.3			G0/660
FVH (80°-90°)	1.4	0.4			G0/10
BL (0°-30°)	0.0	0.0	B0/110		
BM (30°-60°)	0.0	0.0	B0/220		
BH (60°-80°)	0.0	0.0	B0/110		G0/110
BVH (80°-90°)	0.0	0.0			G0/10
UL (90°-100°)	0.4	0.1		U1/10	
UH (100°-180°)	0.0	0.0		U1/10	
Trapped Light	326.5	93.3			

**BUG Rating: B0-U1-G0**  
 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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
12.5°	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0
15°	0.9	0.9	0.9	0.7	0.5	0.3	0.2	0.1	0.1	0.1	0.0
17.5°	1.5	1.6	1.5	1.2	1.0	0.6	0.3	0.2	0.1	0.1	0.0
20°	2.1	2.4	2.1	1.9	1.4	0.9	0.6	0.3	0.1	0.0	0.0
22.5°	3.2	3.4	3.1	2.9	2.0	1.5	0.9	0.4	0.1	0.0	0.0
25°	4.6	4.7	4.3	3.9	2.8	2.0	1.2	0.5	0.1	0.0	0.0
27.5°	4.9	5.1	5.0	4.7	3.5	2.7	1.6	0.7	0.3	0.0	0.0
30°	5.0	5.5	5.3	4.8	4.0	3.3	2.1	1.0	0.4	0.1	0.0
32.5°	5.2	5.5	5.5	4.7	4.3	3.6	2.7	1.2	0.5	0.1	0.0
35°	5.2	5.4	5.4	4.7	4.4	3.8	2.9	2.0	0.6	0.1	0.0
37.5°	5.1	5.5	5.3	4.7	4.3	4.0	3.0	2.2	0.5	0.2	0.0
40°	5.0	5.4	5.9	7.1	4.3	3.8	3.1	2.1	0.5	0.2	0.0
42.5°	5.8	6.5	8.3	6.8	4.5	3.7	2.6	1.5	0.5	0.1	0.0
45°	15.2	14.4	13.1	7.5	7.2	3.6	2.3	1.2	0.4	0.1	0.0
47.5°	30.8	27.9	21.0	10.6	10.0	3.8	2.4	1.1	0.4	0.1	0.0
50°	32.0	30.5	23.9	18.2	12.5	4.6	2.5	1.1	0.4	0.1	0.0
52.5°	31.7	30.0	31.4	26.1	16.3	7.8	2.9	1.2	0.5	0.1	0.1
55°	37.2	39.9	28.3	24.7	18.9	6.4	3.3	1.4	0.6	0.1	0.1
57.5°	28.4	29.4	18.9	21.9	27.9	7.2	3.4	1.5	0.7	0.2	0.1
60°	28.3	30.0	24.5	23.0	18.9	15.2	3.4	1.7	0.8	0.2	0.1
62.5°	21.2	23.3	17.5	19.6	17.5	11.6	3.6	1.9	0.9	0.3	0.1
65°	19.0	21.4	23.5	26.1	14.4	12.6	3.9	2.0	1.0	0.3	0.1
67.5°	17.2	18.6	18.1	19.5	11.9	18.3	3.7	2.0	1.0	0.3	0.1
70°	20.7	22.0	23.4	27.0	16.0	11.5	3.8	2.0	1.0	0.3	0.2
72.5°	24.5	26.2	24.2	26.1	16.5	17.5	3.3	1.8	0.9	0.3	0.2
75°	27.1	28.0	29.4	33.0	22.8	12.1	2.9	1.7	0.9	0.3	0.1
77.5°	17.8	18.7	19.0	18.5	14.2	11.3	2.7	1.6	0.8	0.3	0.1
80°	13.9	14.3	14.3	13.3	9.7	4.2	2.2	1.4	0.7	0.2	0.1
82.5°	3.3	3.6	3.9	4.0	3.7	3.5	1.9	1.2	0.6	0.2	0.1
85°	5.7	6.0	5.0	4.1	2.8	2.0	1.5	1.0	0.5	0.2	0.1
87.5°	1.7	1.8	2.0	2.0	2.0	1.8	1.2	0.8	0.4	0.2	0.1
90°	1.3	1.4	1.5	1.6	1.4	1.2	0.8	0.5	0.3	0.1	0.1
92.5°	2.5	2.7	3.0	3.3	2.5	1.1	0.5	0.3	0.2	0.1	0.1
95°	0.8	0.8	0.8	0.8	0.7	0.5	0.3	0.2	0.1	0.1	0.1
97.5°	1.0	0.8	1.0	1.0	1.4	0.9	0.2	0.1	0.1	0.1	0.1
100°	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
102.5°	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1
105°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
107.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
110°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1



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CATALOG NUMBER: 1237L-RD-x-20T3

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
115°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
117.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
120°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
122.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
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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 CATALOG NUMBER: 1237L-RD-x-20T3

**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	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	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
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P10070

CATALOG NUMBER: 1237L-RD-x-20T3

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
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°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.1	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)