

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: P10072

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: P10072
Test Lab: PEACHTREE CITY
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMIERE
Catalog Number: 1237C-RD-x-20T3
Description: LUMIERE 7 INCH INCANDESCENT STEP LIGHT
WITH CROSS FACEPLATE, SAND BLASTED LENS
WITH REFLECTOR
Light Source: BI PIN T3 CLEAR QUARTZ HALOGEN INCANDESCENT LAMP
Q20T3/CL/CD 20WATTS
Ballast/Driver: -

Summary

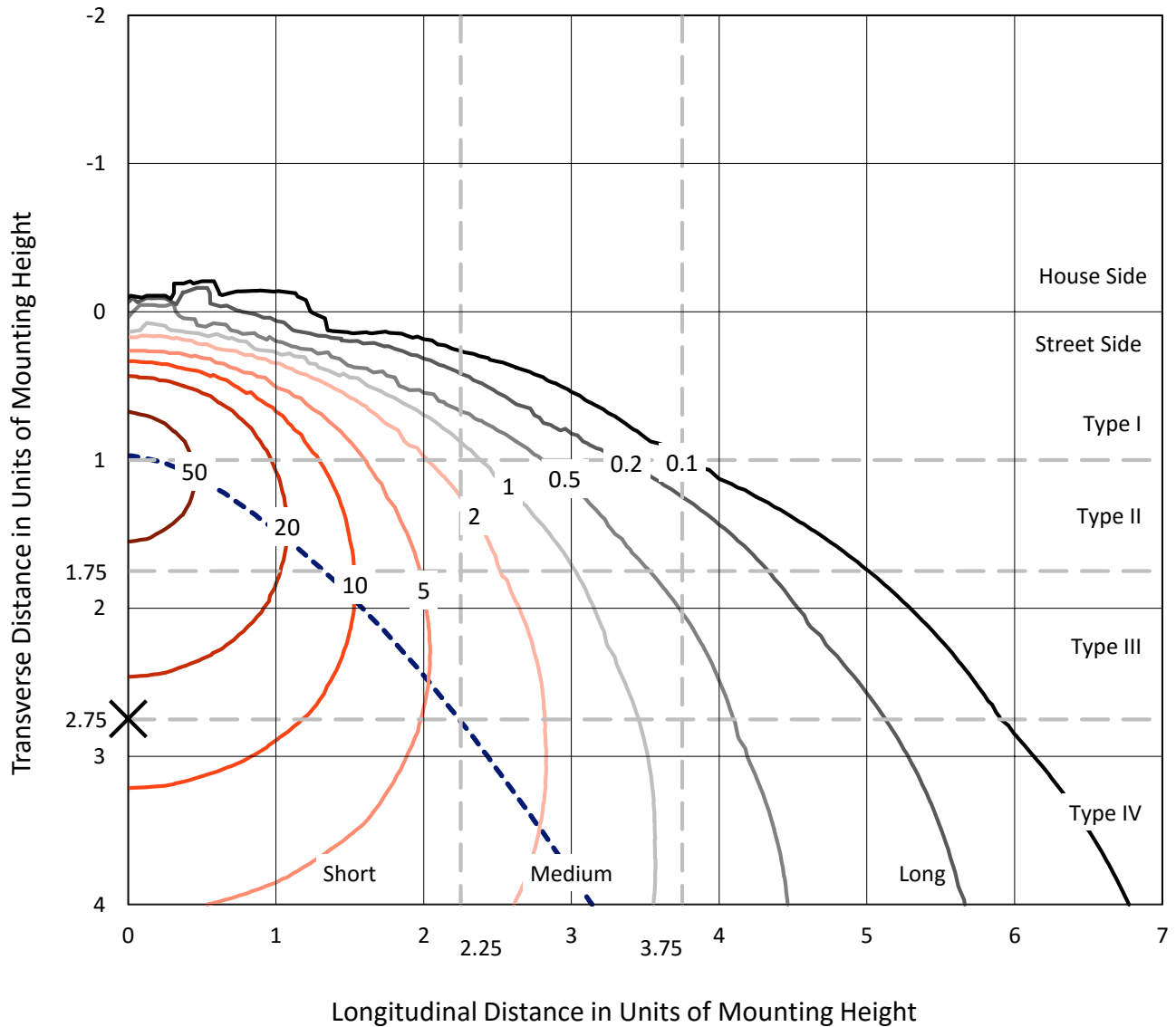
Lumens per Lamp: 350 (1 lamp)
Luminaire Lumens: 129.1 lumens
Efficiency: 36.9%
Efficacy: 6.5 lumens/watt
Luminous Opening: Circular (Dia: 0.46' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B0 - U2 - G1

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

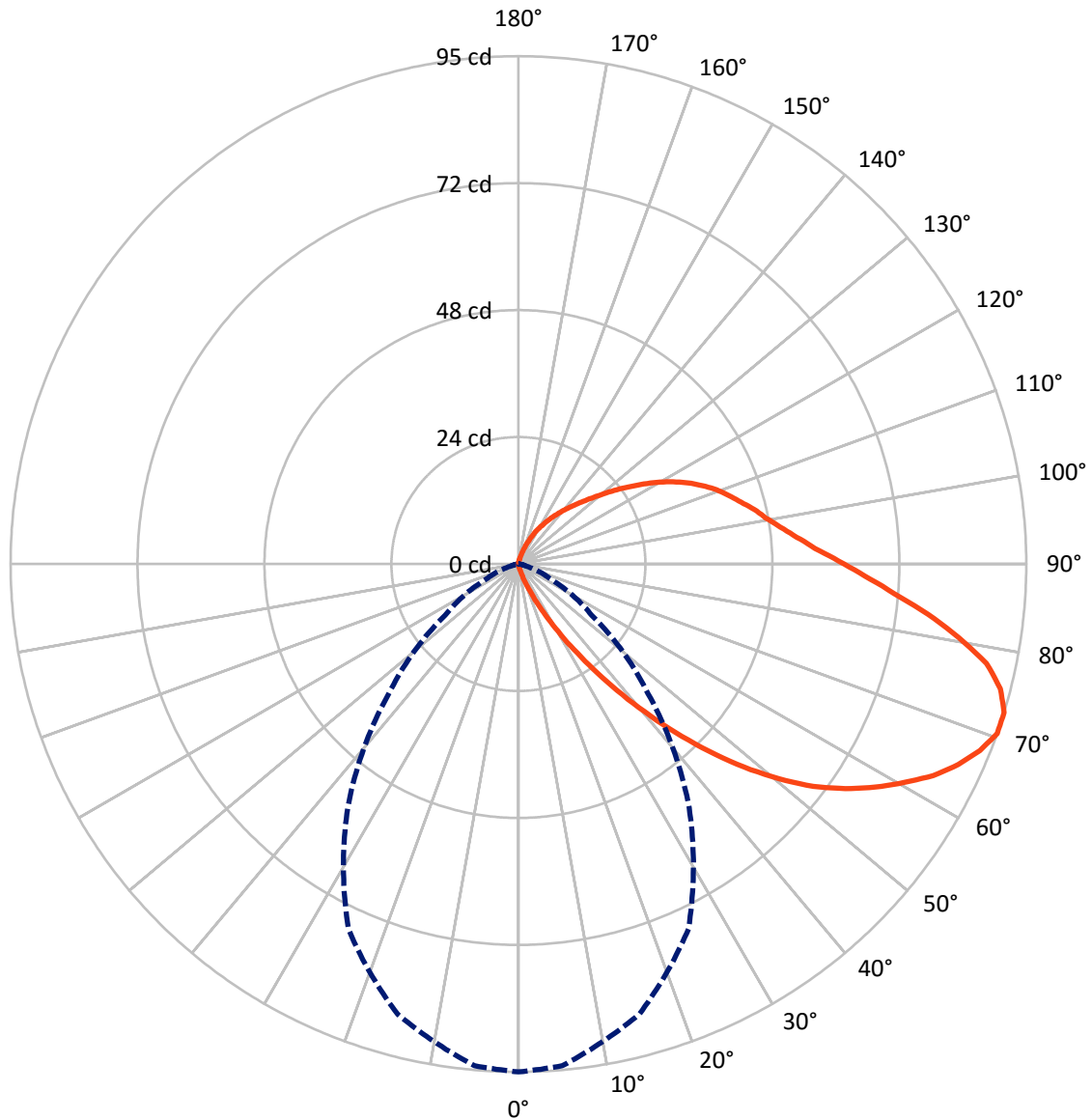
× Max cd
 - - - 1/2 Max cd



Based on 0.5 foot mounting height. Maximum calculated value = 71 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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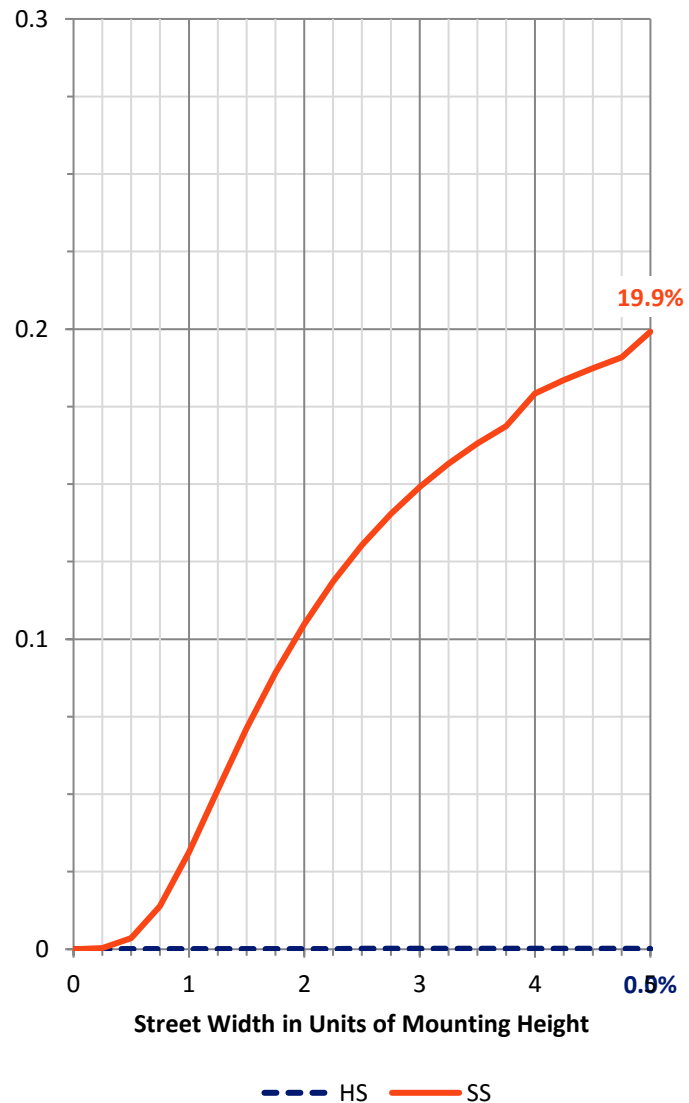
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	0.0	0.1	0.2
	% Lamp	0.0	0.0	0.0
Street Side	Lumens	84.4	44.5	128.9
	% Lamp	24.1	12.7	36.8
Total	Lumens	84.5	44.6	129.1
	% Lamp	24.1	12.7	36.9

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.0	0.0	0.0
10°-20°	0.1	0.1	0.0
20°-30°	0.8	0.6	0.2
30°-40°	3.1	2.4	0.9
40°-50°	7.7	6.0	2.2
50°-60°	13.6	10.6	3.9
60°-70°	19.1	14.8	5.5
70°-80°	21.6	16.8	6.2
80°-90°	18.3	14.2	5.2
90°-100°	14.3	11.0	4.1
100°-110°	11.3	8.8	3.2
110°-120°	8.3	6.5	2.4
120°-130°	5.3	4.1	1.5
130°-140°	3.1	2.4	0.9
140°-150°	1.6	1.2	0.4
150°-160°	0.6	0.4	0.2
160°-170°	0.1	0.1	0.0
170°-180°	0.0	0.0	0.0
0°-90°	84.5	65.5	24.1
0°-180°	129.1	100.0	36.9



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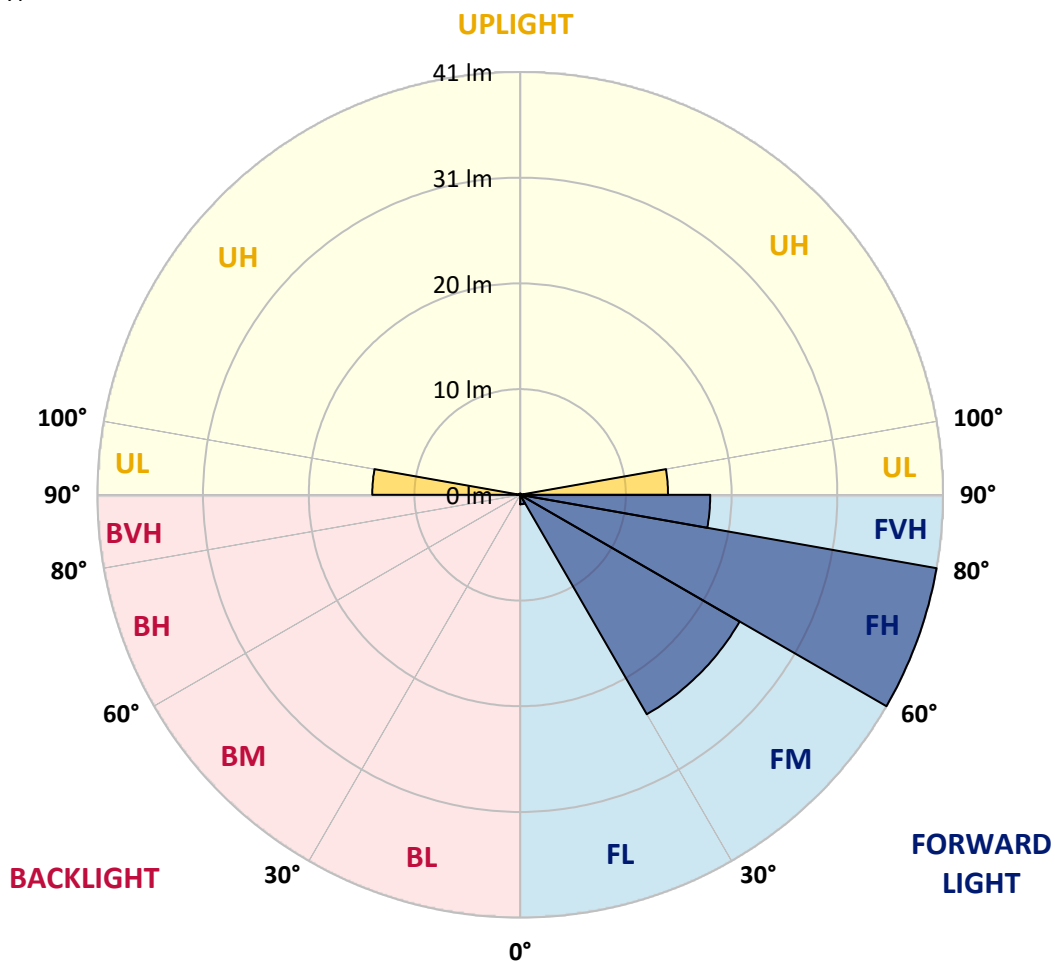
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	0.9	0.3			
FM (30°-60°)	24.4	7.0			
FH (60°-80°)	40.8	11.6			G0/660
FVH (80°-90°)	18.3	5.2			G1/100
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°)	14.3	4.1		U2/50	
UH (100°-180°)	0.1	0.0		U1/10	
Trapped Light	220.9	63.1			

BUG Rating: B0-U2-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2.5°	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5°	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
7.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
12.5°	0.7	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2
15°	1.4	1.4	1.3	1.0	0.8	0.5	0.3	0.3	0.2	0.2	0.2
17.5°	2.2	2.2	2.0	1.7	1.2	0.8	0.4	0.3	0.2	0.2	0.2
20°	3.5	3.5	3.1	2.5	1.9	1.2	0.6	0.3	0.2	0.2	0.1
22.5°	5.4	5.3	4.7	3.7	2.7	1.7	0.9	0.4	0.2	0.2	0.1
25°	7.8	7.7	6.8	5.4	3.9	2.4	1.2	0.5	0.2	0.2	0.1
27.5°	10.9	10.7	9.4	7.5	5.3	3.2	1.6	0.6	0.2	0.2	0.1
30°	14.7	14.4	12.7	10.0	7.1	4.3	2.1	0.8	0.3	0.2	0.1
32.5°	19.1	18.6	16.5	13.0	9.2	5.7	2.7	0.9	0.3	0.2	0.1
35°	24.2	23.8	21.0	16.4	11.7	7.2	3.4	1.2	0.3	0.2	0.1
37.5°	30.1	29.6	25.9	20.3	14.5	9.0	4.3	1.4	0.3	0.1	0.1
40°	36.5	35.9	31.4	24.7	17.5	10.9	5.3	1.8	0.4	0.1	0.1
42.5°	43.2	42.5	37.5	29.6	21.0	13.0	6.3	2.2	0.4	0.1	0.1
45°	50.2	49.1	43.4	34.4	24.4	15.2	7.5	2.6	0.5	0.1	0.1
47.5°	57.0	56.0	49.6	39.4	28.1	17.6	8.7	3.0	0.6	0.1	0.1
50°	63.4	62.4	55.4	44.2	31.7	19.9	10.0	3.5	0.6	0.1	0.1
52.5°	69.4	68.2	60.8	48.8	35.3	22.2	11.1	4.0	0.7	0.1	0.1
55°	74.5	73.4	65.9	53.4	38.7	24.5	12.2	4.5	0.8	0.1	0.1
57.5°	79.1	78.3	70.4	57.5	42.1	26.5	13.3	4.9	0.9	0.1	0.1
60°	83.3	82.5	74.6	61.6	45.3	28.6	14.3	5.4	1.0	0.2	0.1
62.5°	87.5	86.3	78.6	65.7	48.4	30.3	15.1	5.7	1.1	0.2	0.1
65°	90.8	89.8	82.3	69.5	51.3	32.0	15.8	6.1	1.2	0.2	0.1
67.5°	93.5	92.7	85.4	73.1	54.0	33.3	16.4	6.3	1.3	0.2	0.1
70°	95.4	94.6	87.6	75.6	55.9	34.4	16.8	6.6	1.4	0.2	0.1
72.5°	95.4	94.8	88.3	76.7	57.0	34.9	17.0	6.8	1.4	0.2	0.1
75°	93.5	93.0	87.2	76.1	56.7	34.9	17.1	6.9	1.5	0.2	0.1
77.5°	89.9	89.1	83.8	73.8	55.3	34.3	17.1	7.1	1.6	0.2	0.1
80°	83.9	83.5	78.9	69.8	53.0	33.4	17.0	7.1	1.6	0.2	0.1
82.5°	77.5	77.2	73.0	65.1	50.1	32.1	16.7	7.2	1.7	0.2	0.1
85°	70.8	70.8	67.1	60.3	47.1	30.8	16.4	7.2	1.7	0.2	0.1
87.5°	65.1	64.9	61.8	55.7	44.2	29.4	16.0	7.1	1.7	0.2	0.1
90°	60.2	60.0	57.0	51.7	41.5	28.0	15.6	7.0	1.7	0.2	0.1
92.5°	55.8	55.8	53.1	48.3	39.1	26.8	15.0	6.9	1.7	0.2	0.1
95°	52.5	52.5	49.9	45.5	37.0	25.6	14.5	6.7	1.7	0.2	0.1
97.5°	49.7	49.7	47.3	43.1	35.1	24.3	13.9	6.5	1.6	0.2	0.1
100°	47.3	47.4	45.0	41.0	33.3	23.2	13.4	6.4	1.6	0.2	0.2
102.5°	45.5	45.4	43.0	39.1	31.5	21.9	12.8	6.1	1.6	0.2	0.2
105°	43.4	43.4	41.1	37.1	29.8	20.7	12.2	5.9	1.5	0.2	0.2
107.5°	41.6	41.5	39.2	35.1	28.0	19.5	11.7	5.7	1.5	0.2	0.2
110°	39.8	39.6	37.2	33.1	26.2	18.3	11.0	5.5	1.4	0.2	0.2



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

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	37.6	37.5	35.0	30.8	24.2	17.1	10.4	5.2	1.3	0.2	0.2
115°	35.4	35.2	32.6	28.4	22.3	15.8	9.8	5.0	1.3	0.2	0.2
117.5°	32.9	32.7	30.1	25.9	20.5	14.7	9.2	4.7	1.2	0.2	0.2
120°	30.2	30.1	27.4	23.6	18.7	13.6	8.6	4.4	1.1	0.2	0.2
122.5°	27.4	27.3	24.9	21.3	17.0	12.6	8.0	4.1	1.0	0.2	0.2
125°	24.7	24.5	22.4	19.2	15.5	11.6	7.5	3.8	0.9	0.2	0.2
127.5°	22.2	21.9	20.1	17.4	14.2	10.6	7.0	3.4	0.8	0.2	0.2
130°	19.8	19.6	18.0	15.6	12.9	9.8	6.4	3.1	0.8	0.2	0.2
132.5°	17.7	17.6	16.2	14.2	11.7	8.9	5.8	2.8	0.7	0.2	0.2
135°	15.9	15.8	14.7	12.8	10.6	8.1	5.2	2.5	0.6	0.2	0.2
137.5°	14.3	14.1	13.2	11.6	9.6	7.4	4.7	2.1	0.6	0.2	0.2
140°	12.8	12.7	11.8	10.4	8.6	6.6	4.1	1.8	0.5	0.2	0.2
142.5°	11.4	11.3	10.6	9.3	7.7	5.8	3.5	1.5	0.5	0.2	0.2
145°	10.1	9.9	9.3	8.1	6.8	5.0	2.9	1.3	0.4	0.2	0.2
147.5°	8.7	8.6	8.1	7.2	5.8	4.2	2.4	1.0	0.4	0.2	0.2
150°	7.6	7.5	7.0	6.1	4.9	3.5	2.0	0.9	0.4	0.2	0.2
152.5°	6.3	6.3	5.8	5.0	4.0	2.8	1.6	0.7	0.3	0.2	0.2
155°	5.0	5.0	4.6	3.9	3.1	2.1	1.2	0.6	0.3	0.2	0.2
157.5°	3.9	3.8	3.5	3.0	2.4	1.6	0.9	0.5	0.3	0.2	0.2
160°	2.8	2.8	2.5	2.2	1.7	1.2	0.7	0.4	0.3	0.2	0.2
162.5°	1.9	1.9	1.8	1.5	1.2	0.8	0.5	0.4	0.3	0.2	0.2
165°	1.2	1.2	1.1	1.0	0.8	0.6	0.4	0.3	0.2	0.2	0.2
167.5°	0.7	0.7	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2
170°	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
172.5°	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
175°	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
177.5°	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
180°	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: 1237C-RD-x-20T3

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.1	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
92.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
95°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
97.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
100°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
102.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
105°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
107.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
110°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1



REPORT NUMBER: P10072

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

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
115°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
117.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
120°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

(END OF REPORT)