

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: P10080

Luminaire Tested: **1237L-RD-x-MHT4.5**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-31-95  
Report Number: P10080  
Test Lab: PEACHTREE CITY  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMIERE  
Catalog Number: 1237L-RD-x-MHT4.5  
Description: LUMIERE 7 INCH ROUND HID STEP LIGHT  
WITH LOUVER FACE PLATE AND CLEAR LENS  
WITH REFLECTOR  
Light Source: BI PIN T4.5 CLEAR CERAMIC METAL HALIDE LAMP  
CMH20/TC/830 20 WATTS  
Ballast/Driver: B138

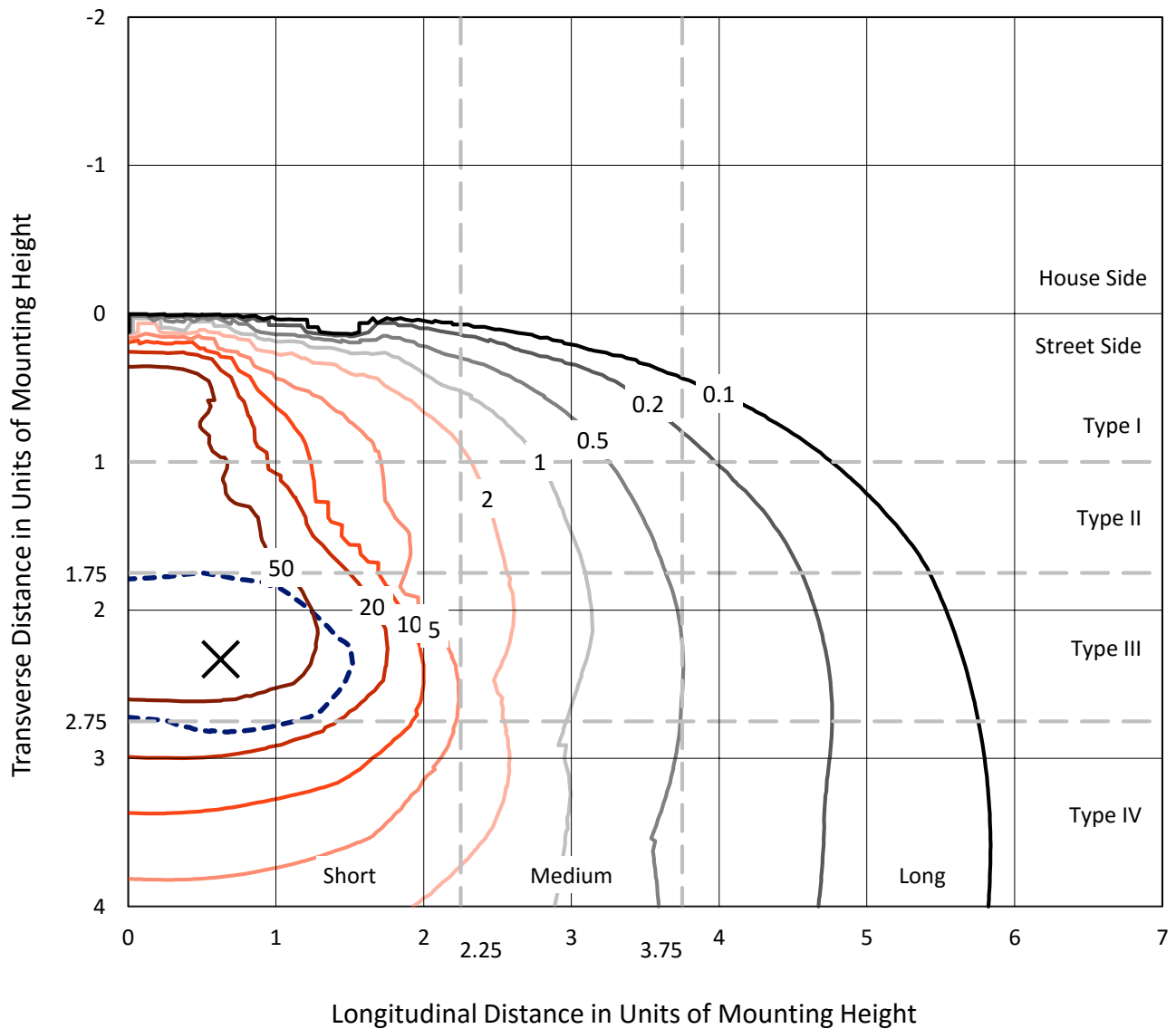
**Summary**

Lumens per Lamp: 1700 (1 lamp)  
Luminaire Lumens: 140.4 lumens  
Efficiency: 8.3%  
Efficacy: 5.6 lumens/watt  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
IES Classification: Type III - Short - Cutoff  
BUG Rating: B0 - U1 - G0  
  
Input Watts (W): 25  
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

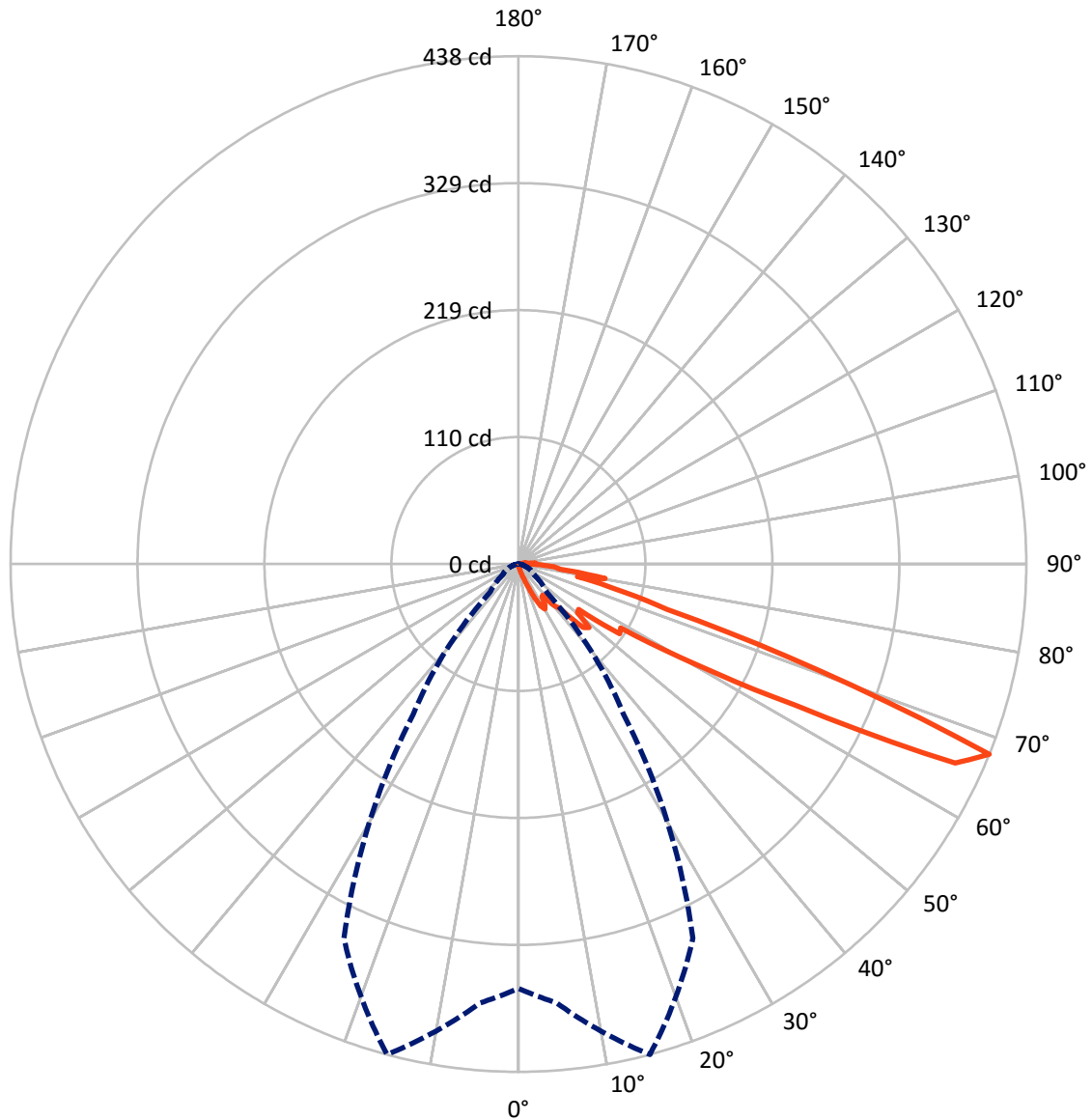
× Max cd  
 - - - 1/2 Max cd



Based on 0.5 foot mounting height. Maximum calculated value = 122 fc  
 Type III - Short - Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 15-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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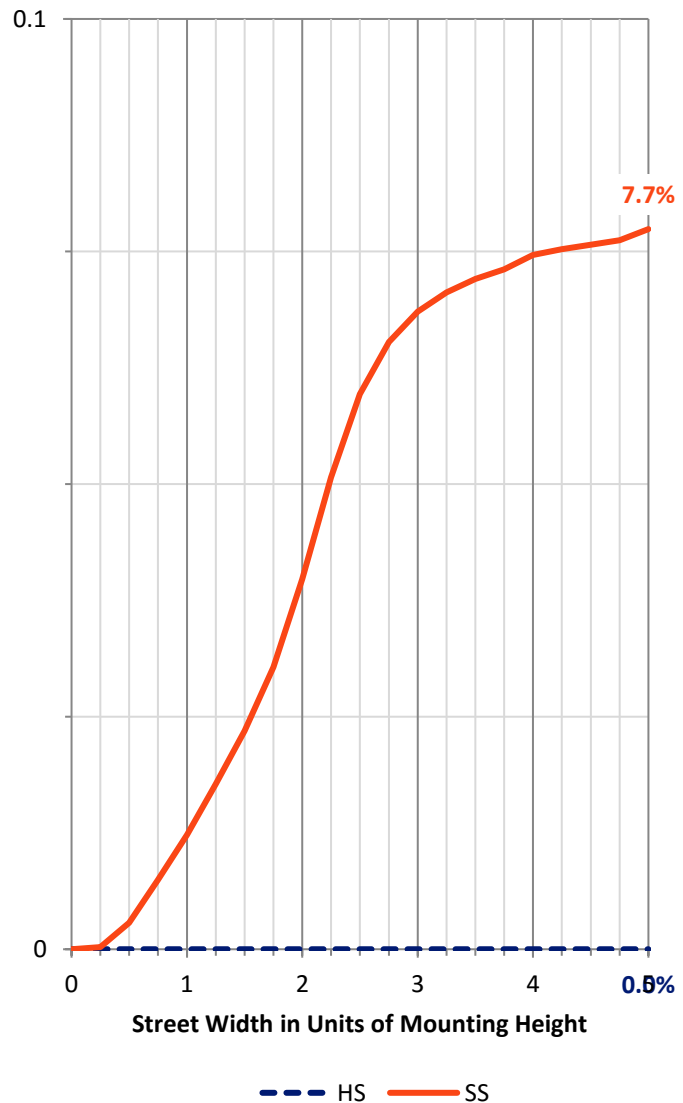
**FLUX DISTRIBUTION:**

		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	137.8	2.6	140.4
	% Lamp	8.1	0.2	8.3
<b>Total</b>	Lumens	137.8	2.6	140.4
	% Lamp	8.1	0.2	8.3

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.0	0.0	0.0
10°-20°	0.4	0.3	0.0
20°-30°	3.5	2.5	0.2
30°-40°	7.2	5.1	0.4
40°-50°	11.0	7.8	0.6
50°-60°	19.7	14.0	1.2
60°-70°	60.5	43.1	3.6
70°-80°	27.5	19.6	1.6
80°-90°	8.0	5.7	0.5
90°-100°	2.3	1.6	0.1
100°-110°	0.3	0.2	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	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°	137.8	98.1	8.1
0°-180°	140.4	100.0	8.3



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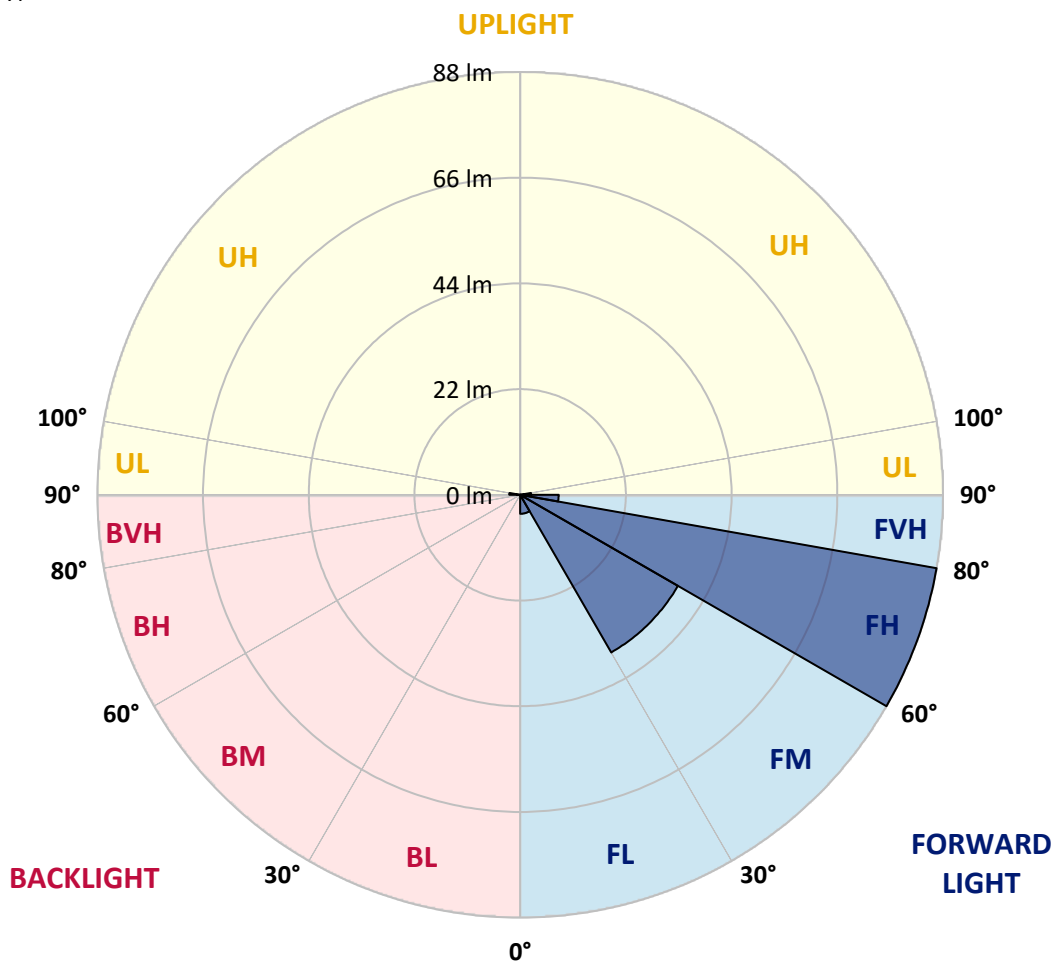
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3.9	0.2			
FM	(30°-60°)	37.9	2.2			
FH	(60°-80°)	88.0	5.2			G0/660
FVH	(80°-90°)	8.0	0.5			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°)	2.3	0.1		U1/10	
UH	(100°-180°)	0.0	0.0		U0/0	
Trapped Light		1559.6	91.7			

**BUG Rating: B0-U1-G0**

Type III 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
2.5°	0	0	0	0	0	0	0	0	0	0	0
5°	0	0	0	0	0	0	0	0	0	0	0
7.5°	0	0	0	0	0	0	0	0	0	0	0
10°	1	1	1	1	1	1	0	0	0	0	0
12.5°	3	3	3	2	2	1	1	0	0	0	0
15°	6	6	6	4	3	2	1	0	0	0	0
17.5°	11	10	10	7	5	3	1	1	0	0	0
20°	15	16	14	12	9	5	2	1	0	0	0
22.5°	23	23	21	18	13	9	4	1	0	0	0
25°	33	33	31	25	19	12	7	2	0	0	0
27.5°	41	42	41	35	27	17	10	3	1	0	0
30°	46	45	45	42	34	23	11	3	1	0	0
32.5°	46	43	42	42	40	28	13	3	1	0	0
35°	40	37	35	37	39	31	14	3	1	0	0
37.5°	62	63	34	31	34	29	12	4	1	0	0
40°	62	58	47	28	29	26	12	4	1	0	0
42.5°	47	44	52	44	26	24	11	4	1	0	0
45°	48	48	78	58	25	22	10	4	1	0	0
47.5°	81	88	82	67	27	20	10	4	2	0	0
50°	115	103	66	64	48	19	11	5	2	0	0
52.5°	66	63	65	61	47	19	12	6	2	0	0
55°	102	108	106	77	42	20	13	7	3	0	0
57.5°	120	121	104	108	75	20	14	8	3	0	0
60°	177	178	175	127	84	21	15	9	4	1	0
62.5°	292	292	268	176	75	23	16	11	4	1	0
65°	396	402	414	294	113	22	16	11	4	1	0
67.5°	366	380	438	356	158	35	17	11	5	1	0
70°	202	213	274	309	205	21	17	11	5	1	0
72.5°	127	130	134	150	135	32	18	10	5	1	0
75°	79	81	87	93	63	19	16	9	4	1	0
77.5°	57	58	52	44	34	19	13	8	4	1	0
80°	82	83	76	46	32	14	10	7	4	1	0
82.5°	35	35	36	25	19	14	9	6	3	1	0
85°	35	35	31	25	20	9	7	5	3	1	0
87.5°	16	17	17	17	15	8	5	4	2	1	0
90°	9	9	9	9	8	5	4	3	2	0	0
92.5°	13	15	15	15	10	4	3	2	1	0	0
95°	4	5	4	4	4	2	1	1	1	0	0
97.5°	3	4	7	13	6	1	1	1	0	0	0
100°	2	2	3	2	1	1	1	1	0	0	0
102.5°	1	1	1	1	2	1	1	0	0	0	0
105°	1	1	1	1	1	1	1	0	0	0	0
107.5°	0	1	1	1	1	1	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	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°	0	0	0	0	0	0	0	0	0	0
2.5°	0	0	0	0	0	0	0	0	0	0
5°	0	0	0	0	0	0	0	0	0	0
7.5°	0	0	0	0	0	0	0	0	0	0
10°	0	0	0	0	0	0	0	0	0	0
12.5°	0	0	0	0	0	0	0	0	0	0
15°	0	0	0	0	0	0	0	0	0	0
17.5°	0	0	0	0	0	0	0	0	0	0
20°	0	0	0	0	0	0	0	0	0	0
22.5°	0	0	0	0	0	0	0	0	0	0
25°	0	0	0	0	0	0	0	0	0	0
27.5°	0	0	0	0	0	0	0	0	0	0
30°	0	0	0	0	0	0	0	0	0	0
32.5°	0	0	0	0	0	0	0	0	0	0
35°	0	0	0	0	0	0	0	0	0	0
37.5°	0	0	0	0	0	0	0	0	0	0
40°	0	0	0	0	0	0	0	0	0	0
42.5°	0	0	0	0	0	0	0	0	0	0
45°	0	0	0	0	0	0	0	0	0	0
47.5°	0	0	0	0	0	0	0	0	0	0
50°	0	0	0	0	0	0	0	0	0	0
52.5°	0	0	0	0	0	0	0	0	0	0
55°	0	0	0	0	0	0	0	0	0	0
57.5°	0	0	0	0	0	0	0	0	0	0
60°	0	0	0	0	0	0	0	0	0	0
62.5°	0	0	0	0	0	0	0	0	0	0
65°	0	0	0	0	0	0	0	0	0	0
67.5°	0	0	0	0	0	0	0	0	0	0
70°	0	0	0	0	0	0	0	0	0	0
72.5°	0	0	0	0	0	0	0	0	0	0
75°	0	0	0	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0



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	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)