

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: P10079

Luminaire Tested: **1237E-SQ-x-MHT4.5**

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: P10079
Test Lab: PEACHTREE CITY
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMIERE
Catalog Number: 1237E-SQ-x-MHT4.5
Description: LUMIERE 7 INCH ROUND HID STEP LIGHT
WITH EYELID FACE PLATE AND SAND BLASTED LENS
WITH REFLECTOR
Light Source: BI PIN T4.5 CLEAR CERAMIC METAL HALIDE LAMP
CMH20/TC/830 20 WATTS
Ballast/Driver: B138

Summary

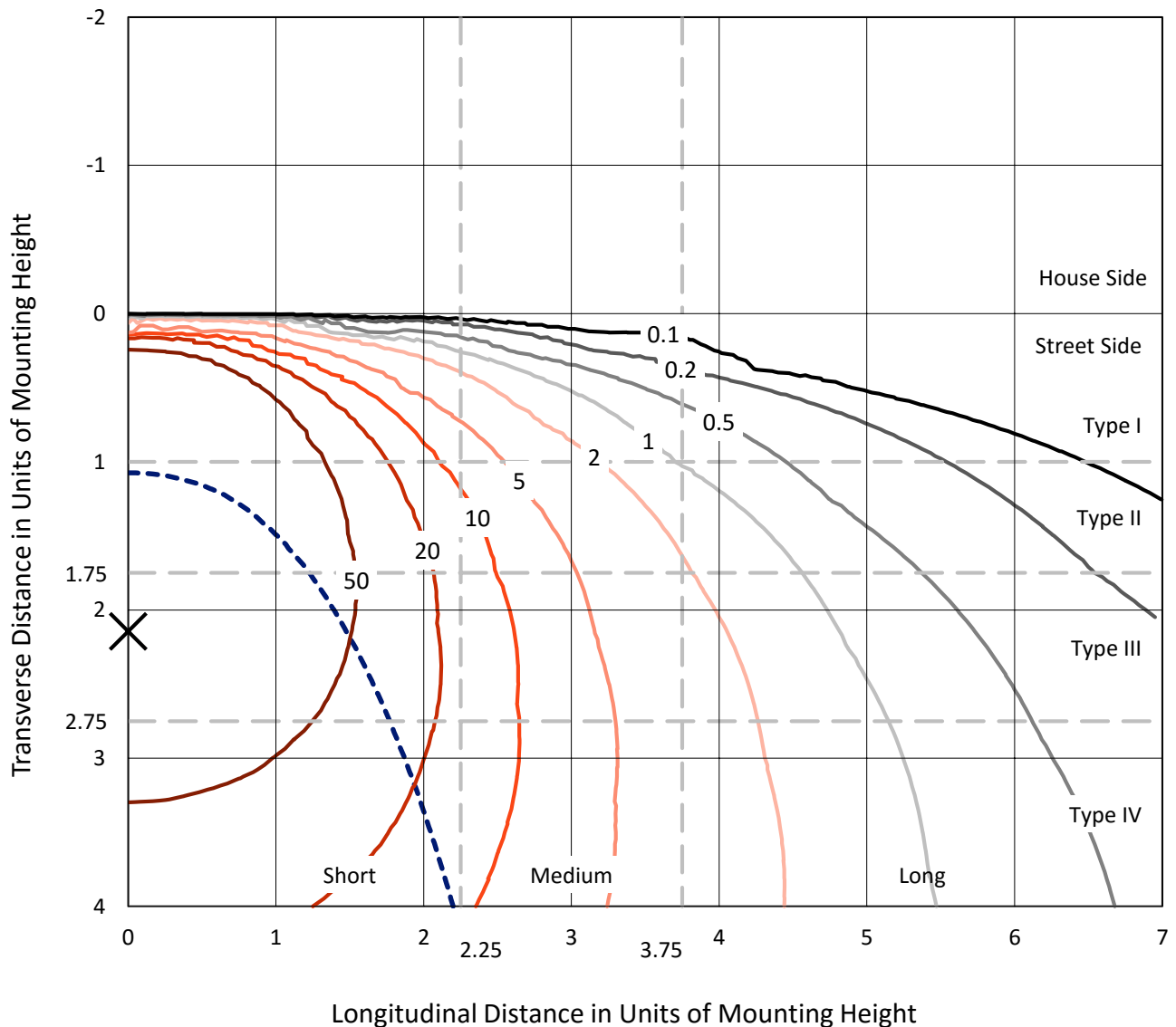
Lumens per Lamp: 1700 (1 lamp)
Luminaire Lumens: 595 lumens
Efficiency: 35.0%
Efficacy: 23.8 lumens/watt
Luminous Opening: Circular (Dia: 0.46' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B0 - U3 - G1

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

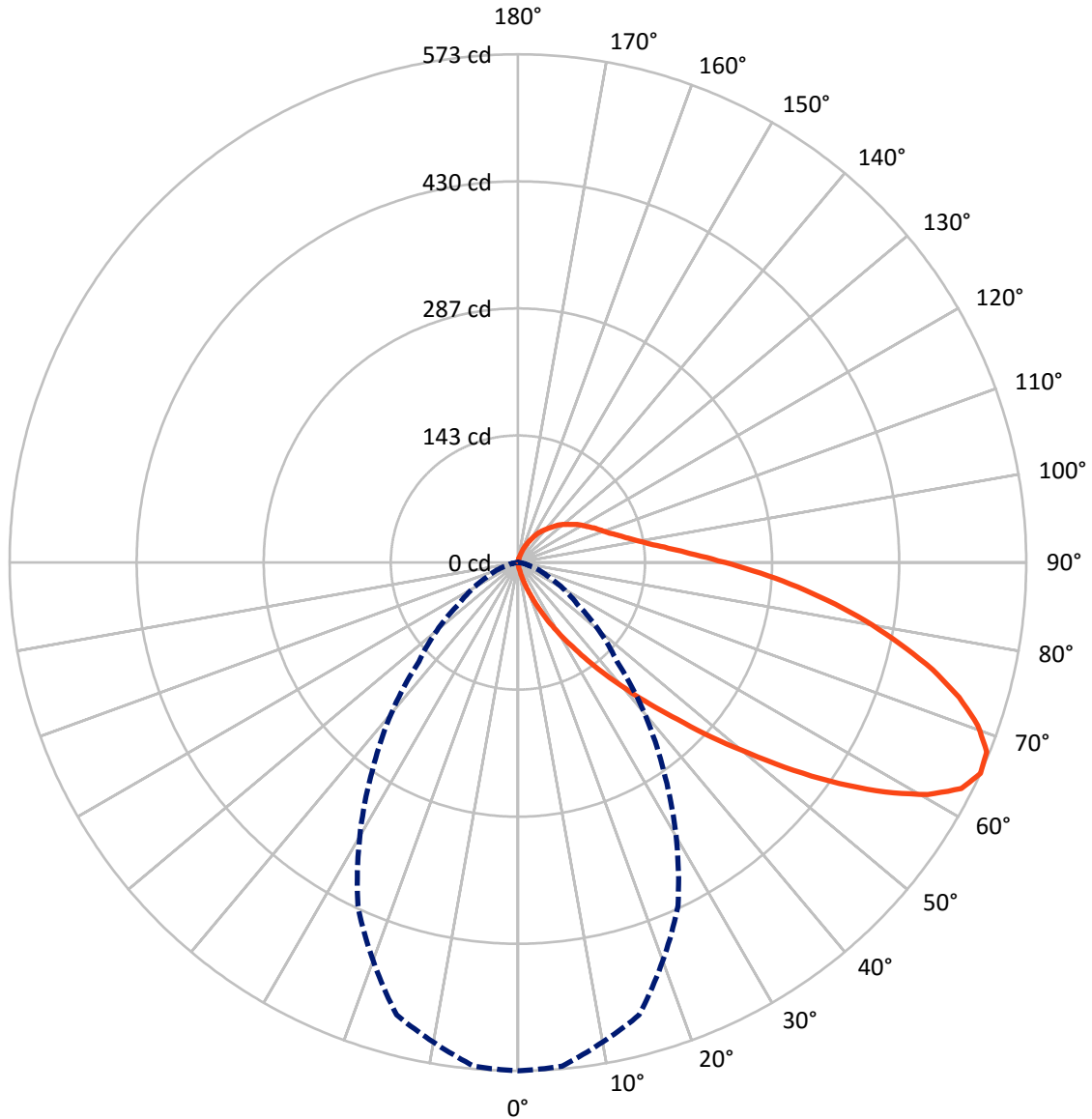
✕ Max cd
 - - - 1/2 Max cd



Based on 0.5 foot mounting height. Maximum calculated value = 362.7 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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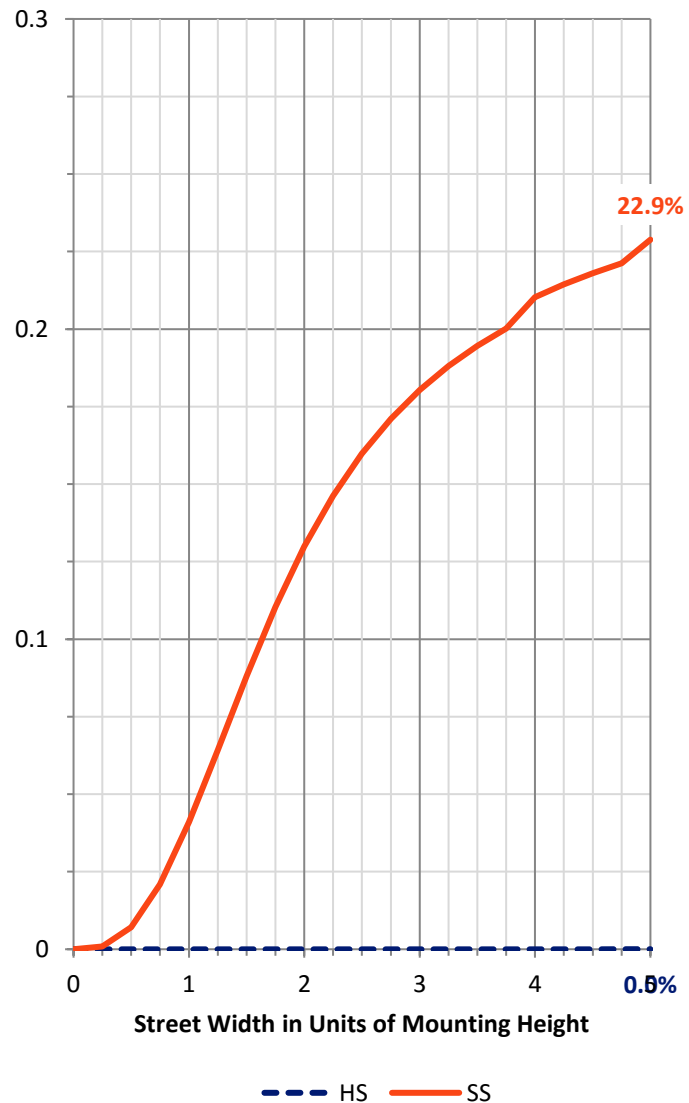
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	0.0	0.0	0.1
	% Lamp	0.0	0.0	0.0
Street Side	Lumens	447.6	147.3	594.9
	% Lamp	26.3	8.7	35.0
Total	Lumens	447.6	147.3	595.0
	% Lamp	26.3	8.7	35.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.1	0.0	0.0
10°-20°	1.3	0.2	0.1
20°-30°	6.9	1.2	0.4
30°-40°	19.8	3.3	1.2
40°-50°	43.7	7.4	2.6
50°-60°	81.8	13.8	4.8
60°-70°	113.8	19.1	6.7
70°-80°	105.5	17.7	6.2
80°-90°	74.7	12.6	4.4
90°-100°	47.6	8.0	2.8
100°-110°	34.0	5.7	2.0
110°-120°	25.7	4.3	1.5
120°-130°	18.5	3.1	1.1
130°-140°	12.0	2.0	0.7
140°-150°	6.5	1.1	0.4
150°-160°	2.5	0.4	0.1
160°-170°	0.5	0.1	0.0
170°-180°	0.0	0.0	0.0
0°-90°	447.6	75.2	26.3
0°-180°	595.0	100.0	35.0



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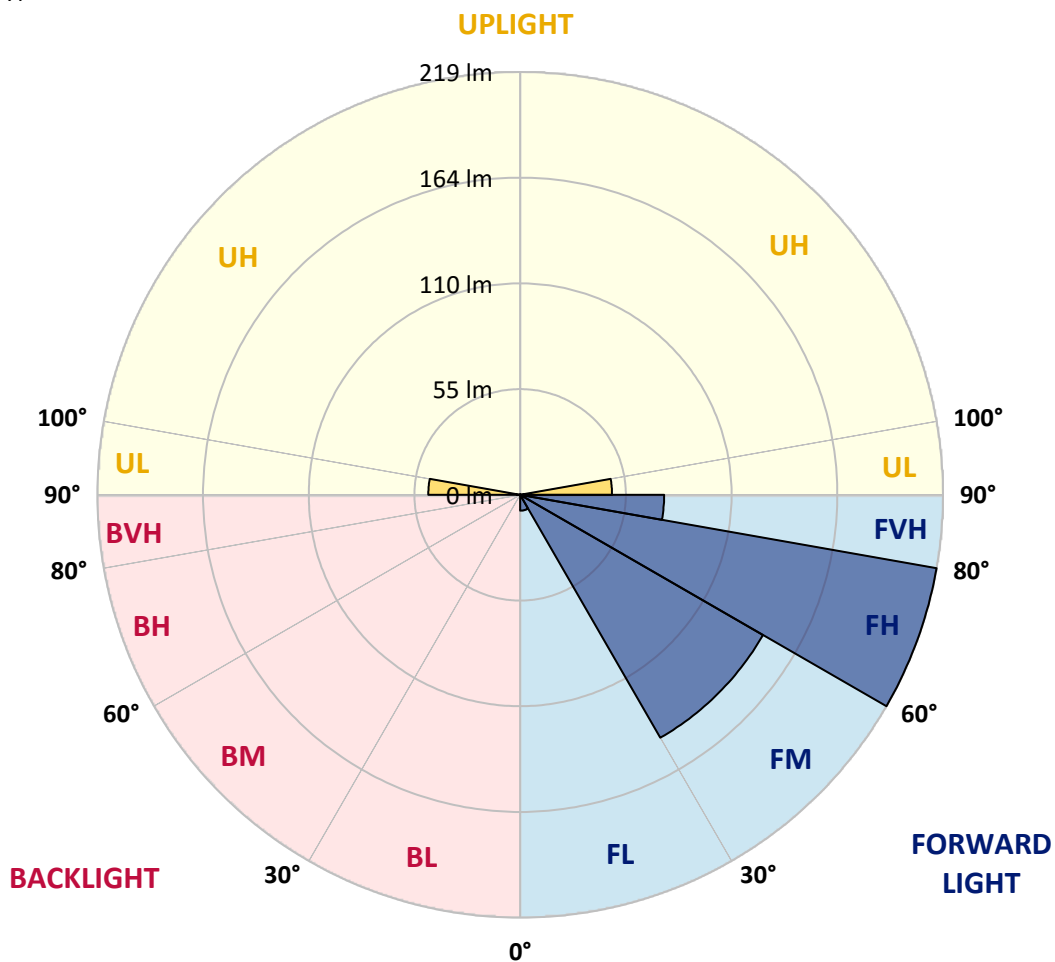
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	8.2	0.5			
FM (30°-60°)	145.4	8.6			
FH (60°-80°)	219.3	12.9			G0/660
FVH (80°-90°)	74.7	4.4			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°)	47.6	2.8		U2/50	
UH (100°-180°)	0.0	0.0		U1/10	
Trapped Light	1105.0	65.0			

BUG Rating: B0-U3-G1

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
2.5°	0	0	0	1	1	1	1	1	1	1	0
5°	1	1	1	1	1	1	1	1	1	1	0
7.5°	1	1	1	1	1	1	1	1	1	1	0
10°	5	5	4	4	3	2	1	1	1	1	0
12.5°	10	10	10	8	6	4	2	1	1	1	0
15°	17	17	16	13	10	7	3	1	1	1	0
17.5°	26	26	24	20	15	10	6	2	1	1	0
20°	36	36	34	28	22	15	8	3	1	1	0
22.5°	48	48	45	38	30	20	12	5	1	1	0
25°	62	62	58	49	38	26	15	6	1	1	0
27.5°	78	77	72	61	48	33	19	8	2	1	0
30°	95	94	88	74	58	40	23	10	2	1	0
32.5°	113	113	104	90	70	48	28	12	3	1	0
35°	135	135	125	106	82	56	33	15	4	1	0
37.5°	160	159	146	124	95	65	37	17	4	1	0
40°	187	186	172	145	110	74	43	19	5	1	0
42.5°	218	217	200	167	126	84	48	21	6	1	0
45°	252	252	232	194	144	94	53	24	7	1	0
47.5°	294	291	268	222	163	104	58	26	7	1	0
50°	338	337	309	253	184	115	63	28	8	1	0
52.5°	389	387	355	289	205	125	67	30	9	1	0
55°	440	437	402	325	228	135	71	32	10	1	0
57.5°	488	486	447	361	248	144	75	34	11	1	0
60°	531	529	487	392	266	151	78	36	12	1	0
62.5°	561	558	516	415	279	156	80	37	12	2	0
65°	573	570	528	427	286	158	81	38	13	2	0
67.5°	570	567	526	425	284	157	82	39	14	2	0
70°	550	548	508	412	276	154	82	40	14	2	0
72.5°	520	517	480	388	262	149	81	41	15	2	0
75°	483	481	444	359	244	143	80	41	15	2	1
77.5°	440	439	404	326	225	136	78	41	16	2	1
80°	397	395	363	293	206	128	76	41	16	2	1
82.5°	352	349	321	260	187	120	74	41	16	2	1
85°	308	306	282	229	168	113	71	40	16	2	1
87.5°	265	264	244	201	151	104	68	39	16	3	1
90°	226	226	210	176	135	96	65	38	16	3	1
92.5°	194	194	181	153	121	90	62	37	16	2	1
95°	170	169	158	137	111	84	60	36	15	2	1
97.5°	150	150	141	124	103	79	57	35	15	2	1
100°	136	135	128	114	96	75	55	33	14	2	1
102.5°	125	124	118	106	90	71	53	32	14	2	1
105°	116	116	110	99	85	68	50	31	13	2	1
107.5°	108	108	103	94	81	65	48	30	12	2	1
110°	102	102	97	89	77	62	46	28	12	2	1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	97	96	92	84	73	59	44	27	11	2	1
115°	92	92	88	80	69	56	42	26	10	2	1
117.5°	87	87	84	76	66	53	40	24	10	1	1
120°	83	83	79	72	62	50	37	22	9	1	1
122.5°	79	79	75	69	59	48	35	21	8	1	1
125°	74	75	71	65	55	45	33	19	7	1	0
127.5°	70	70	67	61	52	43	31	18	6	1	0
130°	66	66	63	57	49	40	28	16	6	1	0
132.5°	62	61	59	53	46	37	26	14	5	1	0
135°	57	57	54	49	43	34	23	13	4	1	0
137.5°	52	52	50	46	39	31	21	11	3	1	0
140°	48	47	46	42	36	28	19	10	3	1	0
142.5°	44	44	42	38	32	25	16	8	2	1	0
145°	40	40	38	34	28	21	14	7	2	1	0
147.5°	35	35	33	30	25	18	12	6	2	1	0
150°	30	30	29	25	21	15	10	4	1	1	0
152.5°	26	25	24	21	17	13	8	3	1	1	0
155°	21	21	20	17	14	10	6	3	1	1	0
157.5°	17	17	16	14	11	7	4	2	1	1	0
160°	13	12	12	10	8	5	3	2	1	1	0
162.5°	9	9	8	7	5	3	2	1	1	1	0
165°	5	5	5	4	3	2	2	1	1	1	0
167.5°	3	3	3	2	2	2	1	1	1	1	0
170°	1	1	1	1	1	1	1	1	1	1	0
172.5°	0	0	0	1	1	1	1	1	1	1	0
175°	0	0	0	1	1	1	1	1	1	1	0
177.5°	0	0	0	1	1	1	1	1	1	1	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)