

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: SHAPER

Report Number: P368738

Luminaire Tested: **674-W-31-L3/840**

Issue Date: 11/13/2019

Test Information

Test Method: LM-79-08
Report Number: P368738
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 11/13/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 674-W-31-L3/840
Description: 31" 674 SERIES LUMINOUS WALL SCONCE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

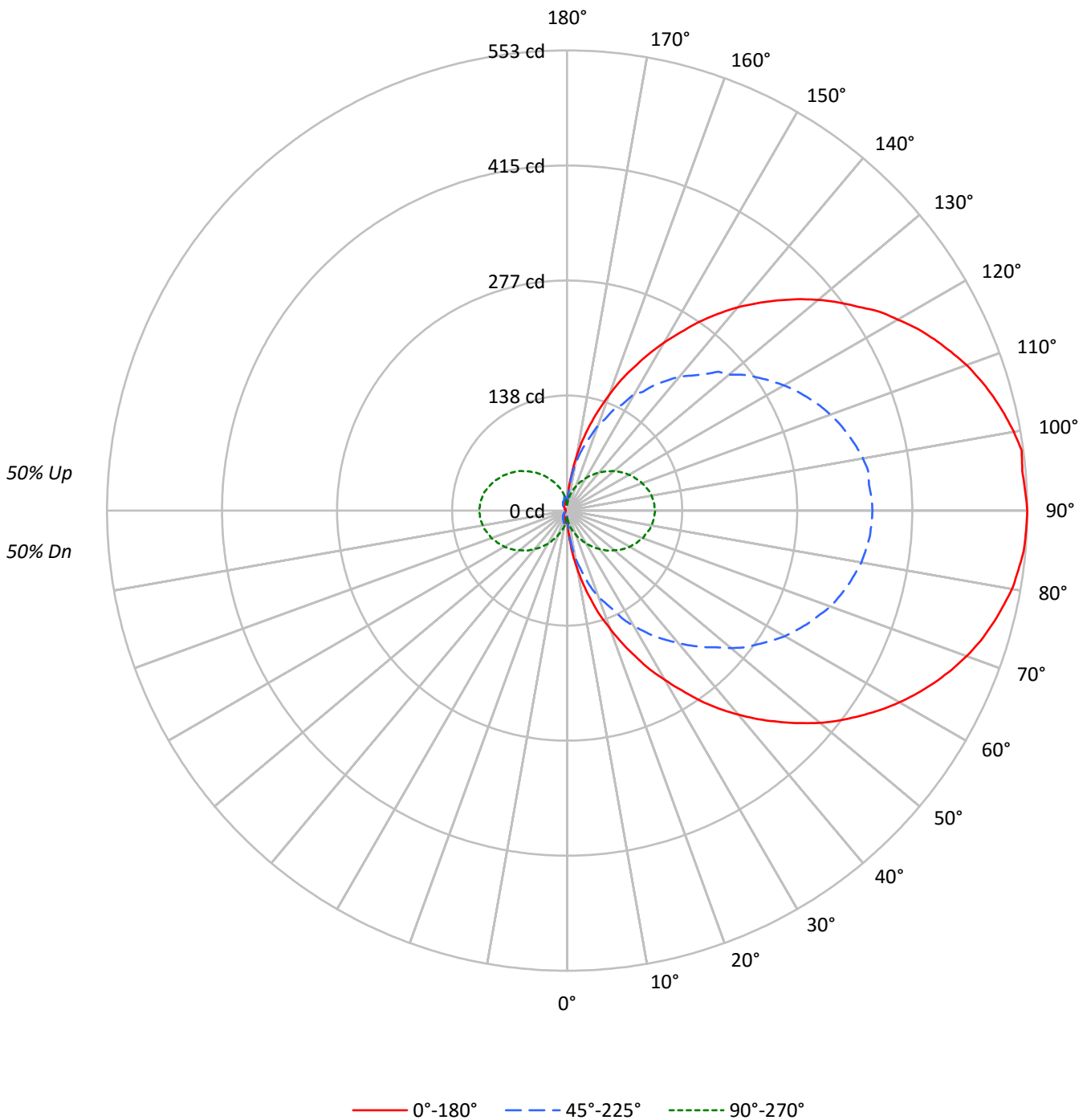
Lumens per Lamp: N/A
Luminaire Lumens: 1769.5 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 8.24 / 5.72 / 6.46
Luminous Opening: Rectangular w/ Sides (W: 0.71' x L: 0.21' x H: 2.58')
CIE Type: General Diffuse

Input Watts (W): 21.2
Input Voltage (V): 120
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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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	92	85	79	74	84	78	72	68	64	60	56	52	49	46	40	38	36	30
2	81	71	63	55	74	65	57	51	53	47	42	42	38	34	32	29	26	21
3	73	61	51	44	66	55	47	40	45	38	33	36	30	26	27	23	20	15
4	66	53	43	35	60	48	39	32	39	32	27	31	25	21	23	19	15	11
5	60	46	36	29	54	42	33	27	34	27	22	27	21	17	20	16	12	9
6	55	41	31	24	50	37	29	22	30	23	18	24	18	14	18	14	10	7
7	50	36	27	21	46	33	25	19	27	20	16	21	16	12	16	12	9	6
8	47	33	24	18	42	30	22	16	24	18	13	19	14	10	15	10	7	5
9	43	30	21	16	39	27	19	14	22	16	12	18	13	9	13	9	6	4
10	40	27	19	14	37	25	17	12	20	14	10	16	11	8	12	8	6	3

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	511	511	511
5°	1229	722	527
10°	1674	856	302
15°	1939	955	175
20°	2126	1034	127
25°	2290	1132	95
30°	2426	1248	72
35°	2566	1328	64
40°	2672	1407	50
45°	2764	1509	31
50°	2855	1571	22
55°	2923	1659	20
60°	2992	1735	13
65°	3053	1800	13
70°	3108	1877	12
75°	3153	1929	12
80°	3198	1995	12
85°	3231	2059	12



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.4	0.1
10°-20°	13.7	0.8
20°-30°	33.6	1.9
30°-40°	61.4	3.5
40°-50°	94.2	5.3
50°-60°	129.2	7.3
60°-70°	162.0	9.2
70°-80°	187.6	10.6
80°-90°	201.7	11.4
90°-100°	201.9	11.4
100°-110°	188.0	10.6
110°-120°	161.7	9.1
120°-130°	128.6	7.3
130°-140°	93.8	5.3
140°-150°	60.9	3.4
150°-160°	33.2	1.9
160°-170°	13.3	0.8
170°-180°	2.3	0.1
0°-30°	49.7	2.8
0°-40°	111.1	6.3
0°-60°	334.5	18.9
0°-90°	885.8	50.1
90°-120°	551.5	31.2
90°-150°	834.9	47.2
90°-180°	884.0	50.0
0°-180°	1769.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7	7	7	7	7	
5°	35	30	13	16	15	5
15°	111	84	25	15	10	33
25°	193	132	38	11	8	91
35°	279	185	53	9	7	176
45°	359	232	68	6	4	279
55°	430	280	81	4	3	386
65°	488	320	92	3	2	484
75°	529	349	100	2	2	559
85°	551	365	105	2	2	448
90°	553	367	106	2	2	303
95°	549	364	105	2	2	449
105°	530	350	100	2	2	560
115°	487	320	91	3	2	483
125°	427	279	80	4	3	384
135°	357	231	67	6	4	277
145°	277	185	52	9	7	175
155°	190	135	38	11	8	89
165°	107	81	24	14	10	32
175°	31	28	12	15	14	4
180°	7	7	7	7	7	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7	7	7	7	7	7	7	7	7	7	7
2.5°	19	17	16	16	16	15	13	11	10	10	10
5°	35	36	38	37	35	30	23	19	16	13	13
7.5°	54	56	58	56	51	44	35	28	23	18	16
10°	72	73	78	75	67	59	47	36	28	21	19
12.5°	91	91	97	92	83	70	58	45	34	25	22
15°	111	111	116	110	98	84	68	53	40	29	25
17.5°	132	130	135	130	114	98	79	61	47	33	28
20°	151	151	157	146	129	111	89	70	53	38	31
22.5°	172	171	169	167	148	120	100	78	58	42	35
25°	193	192	191	173	157	132	113	83	67	47	38
27.5°	215	213	212	195	175	148	120	94	73	51	42
30°	235	232	231	214	187	160	130	100	81	56	46
32.5°	256	253	247	227	203	172	140	109	85	61	49
35°	279	276	269	245	218	185	152	117	92	66	53
37.5°	300	297	287	269	236	196	160	126	97	70	57
40°	320	318	302	278	243	208	170	134	104	75	60
42.5°	340	337	320	296	263	220	180	144	111	79	64
45°	359	356	339	312	276	232	188	148	117	84	68
47.5°	378	375	356	328	290	243	197	155	123	88	71
50°	397	393	374	345	304	257	205	163	130	93	74
52.5°	414	411	391	360	318	270	214	171	135	97	78
55°	430	426	405	374	331	280	223	177	140	101	81
57.5°	446	442	421	387	344	291	232	184	145	104	84
60°	461	457	435	401	355	302	240	190	150	108	87
62.5°	475	471	449	413	367	311	248	197	155	112	89
65°	488	483	460	425	377	320	257	202	160	115	92
67.5°	500	496	472	436	387	328	264	208	164	118	94
70°	511	507	483	445	397	337	271	213	168	121	97
72.5°	521	516	492	454	404	343	277	217	172	123	98
75°	529	524	499	462	411	349	281	221	175	126	100
77.5°	536	531	507	468	417	354	285	224	178	127	102
80°	543	537	513	474	422	359	289	227	180	129	103
82.5°	547	542	517	478	426	362	292	229	182	130	104
85°	551	545	520	481	429	365	294	231	183	131	105
87.5°	552	547	523	483	430	366	295	232	184	132	105
90°	553	548	523	484	431	367	296	232	184	132	106
92.5°	551	546	521	482	430	366	295	232	183	132	105
95°	549	544	519	480	428	364	293	230	182	131	105
97.5°	551	546	521	481	429	365	294	230	182	131	104
100°	545	540	516	476	424	361	291	228	180	129	103
102.5°	538	533	509	470	418	356	287	225	178	127	102
105°	530	525	501	462	411	350	282	221	175	125	100
107.5°	521	517	493	455	404	344	277	217	172	123	98
110°	511	507	483	445	396	337	271	212	168	120	96



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	499	495	472	435	386	329	264	207	164	117	94
115°	487	483	460	424	377	320	255	202	160	114	91
117.5°	474	470	448	413	366	311	247	196	155	111	89
120°	459	455	434	400	354	301	239	190	150	107	86
122.5°	445	441	420	386	342	290	231	183	145	104	83
125°	427	424	404	372	329	279	222	176	139	100	80
127.5°	411	408	388	358	316	268	213	169	134	96	77
130°	394	392	373	343	303	254	204	162	128	92	74
132.5°	376	374	355	327	289	247	194	157	122	87	70
135°	357	355	337	310	275	231	186	148	117	83	67
137.5°	338	336	321	298	264	220	176	139	110	79	63
140°	319	317	304	277	243	210	164	134	103	74	60
142.5°	298	297	287	263	229	197	156	125	98	69	56
145°	277	276	268	247	218	185	145	116	90	64	52
147.5°	254	253	249	226	200	169	138	110	84	60	49
150°	233	232	231	213	188	162	127	100	77	56	45
152.5°	212	211	210	194	172	144	117	95	71	51	41
155°	190	189	193	176	155	135	106	88	65	46	38
157.5°	170	169	170	155	137	119	97	77	59	42	34
160°	148	148	154	143	126	109	87	69	51	37	31
162.5°	127	127	134	124	111	94	77	60	45	33	28
165°	107	107	116	107	95	81	66	50	39	29	24
167.5°	87	87	95	90	80	70	55	44	33	25	21
170°	68	68	74	72	63	56	46	35	27	20	18
172.5°	48	51	56	54	47	42	34	26	22	16	15
175°	31	32	35	35	31	28	22	18	15	12	12
177.5°	13	13	13	13	12	11	10	9	9	9	9
180°	7	7	7	7	7	7	7	7	7	7	7



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7	7	7	7	7	7	7	7	7	7
2.5°	10	10	11	12	12	13	13	13	13	14
5°	13	13	14	15	16	16	15	15	15	15
7.5°	15	15	16	17	17	16	15	14	14	14
10°	17	16	17	18	17	16	14	13	13	13
12.5°	19	17	18	17	16	14	13	12	11	12
15°	22	18	17	16	15	13	12	11	10	10
17.5°	24	19	17	15	14	12	11	10	9	9
20°	26	20	16	14	13	11	10	10	9	9
22.5°	28	20	16	14	12	11	10	9	9	9
25°	31	21	16	13	11	11	10	9	8	8
27.5°	34	22	16	13	11	10	9	9	8	8
30°	36	23	16	12	10	9	9	8	8	7
32.5°	39	24	16	12	9	9	8	8	7	7
35°	42	25	16	11	9	8	8	7	7	7
37.5°	44	26	16	10	8	8	7	7	7	6
40°	47	27	15	10	7	7	6	6	6	6
42.5°	50	28	15	9	7	6	6	6	5	5
45°	52	29	15	9	6	6	5	5	5	4
47.5°	55	30	15	8	5	5	5	4	4	4
50°	57	31	15	8	5	4	4	4	3	3
52.5°	59	32	15	7	4	4	4	3	3	3
55°	62	32	15	7	4	3	3	3	3	3
57.5°	64	33	15	7	3	3	3	3	2	2
60°	66	34	15	6	3	3	3	3	2	2
62.5°	68	35	16	6	3	3	2	2	2	2
65°	70	36	16	6	3	2	2	2	2	2
67.5°	72	37	16	6	2	2	2	2	2	2
70°	74	38	16	6	2	2	2	2	2	2
72.5°	75	38	16	6	2	2	2	2	2	2
75°	76	39	17	6	2	2	2	2	2	2
77.5°	77	39	17	6	2	2	2	2	2	2
80°	78	40	17	6	2	2	2	2	2	2
82.5°	79	40	17	6	2	2	2	2	2	2
85°	80	41	17	6	2	2	2	2	2	2
87.5°	80	41	17	6	2	2	2	2	2	2
90°	80	41	17	6	2	2	2	2	2	2
92.5°	80	41	17	6	2	2	2	2	1	2
95°	80	41	17	6	2	2	2	2	2	2
97.5°	79	40	17	6	2	2	2	2	2	2
100°	78	40	17	6	2	2	2	2	2	2
102.5°	77	39	16	6	2	2	2	2	2	2
105°	76	39	16	6	2	2	2	2	2	2
107.5°	75	38	16	6	2	2	2	2	2	2
110°	73	37	16	6	2	2	2	2	2	2



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	71	36	16	6	2	2	2	2	2	2
115°	70	36	16	6	3	2	2	2	2	2
117.5°	68	35	15	6	3	2	2	2	2	2
120°	65	34	15	6	3	3	3	2	2	2
122.5°	64	33	15	7	4	3	3	3	3	3
125°	61	32	15	7	4	4	3	3	3	3
127.5°	59	31	15	7	4	4	4	3	3	3
130°	57	30	15	8	5	4	4	4	4	4
132.5°	54	30	15	8	5	5	5	4	4	4
135°	52	29	15	9	6	6	5	5	4	4
137.5°	49	28	15	9	7	6	6	5	5	5
140°	47	27	15	10	7	7	6	6	6	6
142.5°	44	26	15	10	8	7	7	7	6	6
145°	41	25	15	11	9	8	8	7	7	7
147.5°	38	24	15	11	9	8	8	8	7	7
150°	36	23	16	12	10	9	9	8	7	7
152.5°	33	22	16	13	11	10	9	8	8	7
155°	31	21	16	13	11	10	10	9	8	8
157.5°	28	20	16	14	12	11	10	9	9	8
160°	25	19	16	14	12	11	10	9	8	8
162.5°	23	18	16	15	13	12	10	9	9	8
165°	21	18	17	16	14	13	11	10	10	10
167.5°	19	17	18	17	16	14	12	12	11	11
170°	16	16	17	18	17	15	14	13	12	12
172.5°	14	14	15	17	17	16	15	14	13	13
175°	12	12	13	14	15	15	15	15	14	14
177.5°	9	9	10	11	11	11	12	12	12	12
180°	7	7	7	7	7	7	7	7	7	7

(END OF REPORT)