

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: P25983

Luminaire Tested: **422-P1S-L1/835-UNV-NA-24**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P25983  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 422-P1S-L1/835-UNV-NA-24  
Description: SHAPER INDOOR PENDANT MOUNT DOWNLIGHT  
Light Source: (1) 3500K METROSPEC LED  
12297747  
Ballast/Driver: (1) ERP ELECTRONIC DRIVER  
ELM030W-0550-41

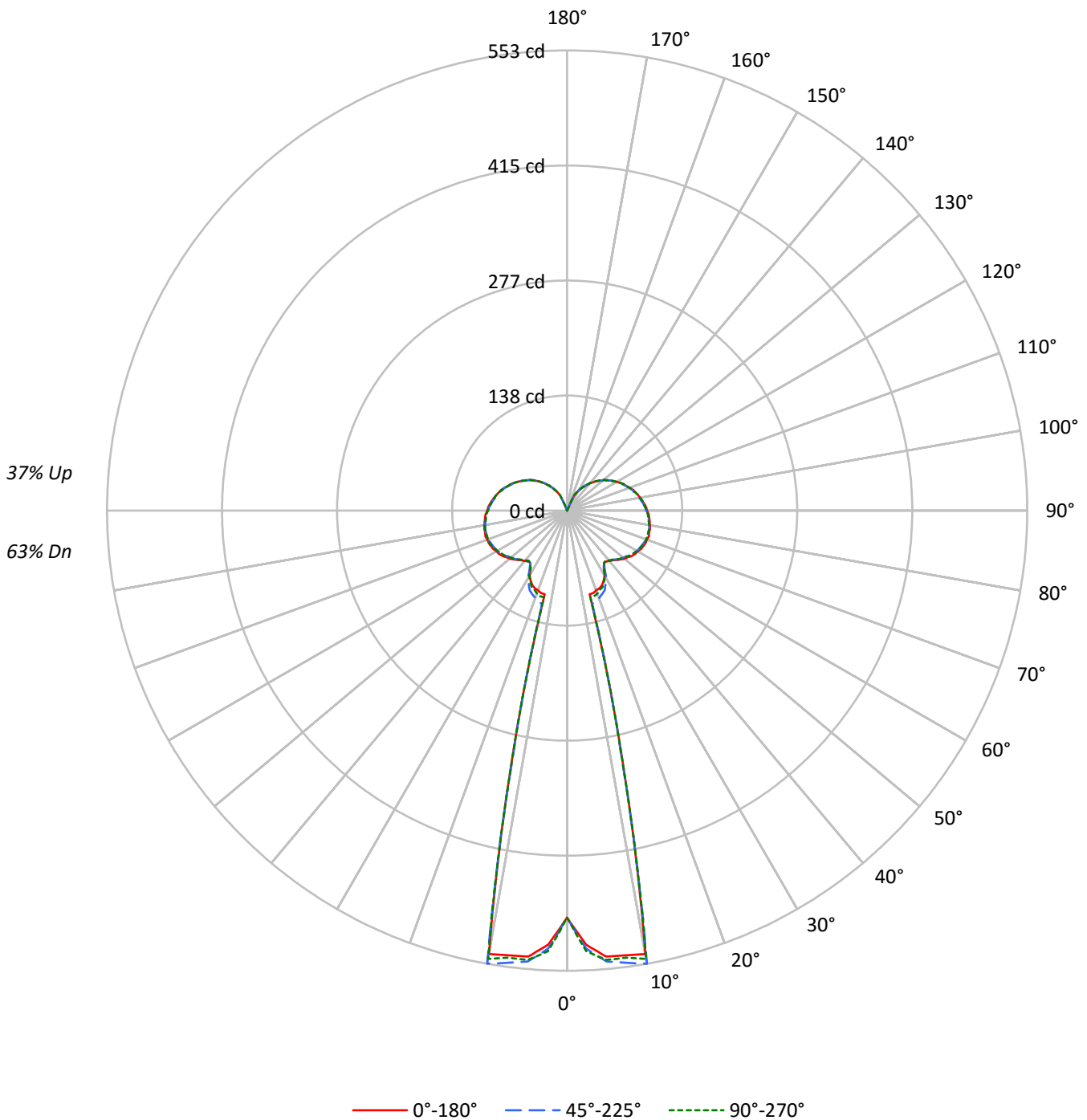
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1054.0 lumens  
Efficiency: N/A  
Efficacy: 49.0 lumens/watt  
Spacing Criteria (0/90/45): 0.46 / 0.46 / 0.37  
Luminous Opening: Vertical Cylinder (Dia: 0.33' x H: 0.71')  
CIE Type: Semi-Direct

Input Watts (W): 21.5  
Input Voltage (V): 120.01  
Input Current (Ain): 0.18115  
Voltage Rise (V): NR  
Power Factor: 0.9901  
Total Harmonic Distortion (THDi): 7.37  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: HR  
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	110	110	110	110	103	103	103	103	91	91	91		79	79	79		68	68	68	63
1	96	90	84	79	89	84	79	74	73	69	65		62	59	56		53	51	48	44
2	86	76	68	62	80	71	64	58	62	56	51		53	48	44		45	41	38	34
3	78	66	57	50	72	62	54	47	54	47	42		46	41	36		39	35	31	27
4	71	59	49	42	66	55	46	40	47	41	35		41	35	31		35	30	27	23
5	66	52	43	36	61	49	41	34	43	36	31		37	31	27		31	27	23	20
6	61	47	38	32	56	44	36	30	39	32	27		34	28	24		29	24	21	18
7	56	43	34	28	52	40	32	27	35	29	24		31	25	21		27	22	19	16
8	53	39	31	25	49	37	29	24	33	26	22		29	23	19		25	20	17	15
9	49	36	28	23	46	34	27	22	30	24	20		27	22	18		23	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18		25	20	16		22	18	15	13

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	60316	60316	60316
5°	53863	54464	54264
10°	45874	46892	46383
15°	7699	8587	7995
20°	6746	7407	7010
25°	5957	6379	6078
30°	5003	5225	5059
35°	4006	4006	4006
40°	3890	3840	3840
45°	3954	3907	3907
50°	4088	3997	3997
55°	4200	4112	4112
60°	4252	4208	4208
65°	4334	4248	4291
70°	4362	4319	4319
75°	4380	4337	4337
80°	4389	4346	4346
85°	4389	4344	4344



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.7	4.9
10°-20°	54.0	5.1
20°-30°	46.4	4.4
30°-40°	50.2	4.8
40°-50°	64.6	6.1
50°-60°	83.6	7.9
60°-70°	99.1	9.4
70°-80°	107.2	10.2
80°-90°	107.2	10.2
90°-100°	100.9	9.6
100°-110°	89.5	8.5
110°-120°	74.1	7.0
120°-130°	56.7	5.4
130°-140°	38.9	3.7
140°-150°	22.6	2.1
150°-160°	7.3	0.7
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	152.0	14.4
0°-40°	202.2	19.2
0°-60°	350.5	33.3
0°-90°	664.0	63.0
90°-120°	264.6	25.1
90°-150°	382.7	36.3
90°-180°	390.0	37.0
0°-180°	1054.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	489	489	489	489	489	
5°	538	541	544	543	542	51
15°	104	107	116	108	108	53
25°	99	100	106	100	101	45
35°	77	78	77	76	77	50
45°	84	84	83	83	83	65
55°	95	94	93	92	93	85
65°	101	100	99	100	100	100
75°	102	102	101	101	101	108
85°	99	98	98	98	98	81
90°	96	96	95	95	95	53
95°	93	92	92	92	92	75
105°	85	84	84	84	85	90
115°	75	74	74	74	75	74
125°	63	63	63	63	63	57
135°	50	50	50	50	50	39
145°	35	35	36	36	36	22
155°	20	20	21	21	21	7
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	489	489	489	489	489	489	489	489	489	489	489
2.5°	522	521	524	526	524	527	526	527	526	527	528
5°	538	536	539	542	539	543	543	545	544	544	545
7.5°	539	538	540	543	541	546	546	549	547	548	548
10°	541	540	542	545	542	548	548	552	551	553	553
12.5°	304	298	302	300	303	305	299	297	303	299	300
15°	104	104	104	106	106	108	109	112	114	116	116
17.5°	104	104	104	105	105	107	108	111	113	115	115
20°	102	102	102	104	104	106	106	109	110	112	112
22.5°	101	100	101	102	102	104	104	106	107	109	110
25°	99	98	98	100	99	101	101	103	104	106	106
27.5°	95	94	94	96	95	97	97	98	99	100	101
30°	90	89	89	90	90	91	91	92	93	94	94
32.5°	82	82	82	83	82	83	82	83	83	84	84
35°	77	77	77	78	77	78	77	77	77	77	78
37.5°	77	76	76	77	76	77	76	77	76	76	77
40°	79	78	78	79	78	79	78	79	78	78	78
42.5°	81	81	80	81	80	81	80	81	80	80	81
45°	84	83	83	84	83	84	83	84	83	83	84
47.5°	87	86	86	87	86	87	86	86	86	86	86
50°	90	89	89	90	89	90	89	89	89	88	89
52.5°	92	91	91	92	91	92	91	91	91	90	91
55°	95	94	93	94	93	94	93	94	93	93	94
57.5°	97	96	95	96	95	96	95	96	95	95	96
60°	98	98	97	98	97	98	97	97	97	97	98
62.5°	100	99	99	100	99	100	99	99	99	98	99
65°	101	100	100	101	100	101	100	100	100	99	101
67.5°	102	101	101	102	101	102	101	101	101	100	101
70°	102	102	101	102	102	102	102	102	102	101	102
72.5°	103	102	101	102	102	102	102	102	102	101	102
75°	102	102	101	102	102	102	102	102	102	101	102
77.5°	102	101	101	102	101	102	101	102	102	101	102
80°	101	100	100	101	101	101	101	101	101	100	101
82.5°	100	99	99	100	99	100	100	100	100	99	100
85°	99	98	98	98	98	99	99	99	99	98	99
87.5°	98	97	97	97	97	98	97	98	98	96	98
90°	96	95	95	96	96	96	96	96	97	95	96
92.5°	95	94	94	94	94	95	94	95	95	94	95
95°	93	92	92	92	92	93	93	93	93	92	93
97.5°	91	91	90	91	91	91	91	91	92	90	91
100°	89	89	88	89	89	89	89	89	90	88	89
102.5°	87	87	86	87	87	87	87	87	88	87	88
105°	85	84	84	84	84	85	85	85	86	84	85
107.5°	83	82	82	82	82	82	83	83	83	82	83
110°	80	80	79	80	80	80	80	80	81	80	80



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	77	77	77	77	77	77	77	78	78	77	78
115°	75	74	74	74	74	75	75	75	75	74	75
117.5°	72	72	71	72	72	72	72	72	73	72	72
120°	69	69	69	69	69	69	69	69	70	69	69
122.5°	66	66	66	66	66	66	66	66	67	66	67
125°	63	63	63	63	63	63	63	63	64	63	63
127.5°	60	60	60	60	60	60	60	60	60	60	60
130°	57	57	56	56	56	56	57	57	57	57	57
132.5°	53	53	53	53	53	53	54	53	54	53	54
135°	50	50	50	50	50	50	50	50	50	50	50
137.5°	46	46	46	46	46	46	47	46	47	47	47
140°	43	43	43	43	43	43	43	43	43	43	43
142.5°	39	39	39	39	39	39	39	39	39	39	39
145°	35	36	35	36	35	35	36	36	36	36	36
147.5°	32	32	32	32	32	32	32	32	32	32	32
150°	28	28	28	28	28	28	28	28	28	28	28
152.5°	24	24	24	24	24	24	24	24	24	24	25
155°	20	20	20	20	20	20	20	21	20	21	21
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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CATALOG NUMBER: 422-P1S-L1/835-UNV-NA-24

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	489	489	489	489	489	489	489	489
2.5°	531	529	531	527	534	530	536	530
5°	547	545	545	541	547	542	549	542
7.5°	550	547	546	541	547	542	549	542
10°	555	552	550	545	551	547	553	547
12.5°	302	298	299	301	306	297	302	303
15°	115	113	110	107	109	109	110	108
17.5°	115	112	109	106	109	109	109	108
20°	112	109	106	104	107	107	107	106
22.5°	109	107	103	102	105	105	105	103
25°	105	103	100	99	102	102	102	101
27.5°	100	98	96	95	97	97	98	96
30°	94	92	90	89	91	91	92	91
32.5°	84	83	82	82	83	83	83	82
35°	77	77	76	76	77	76	77	77
37.5°	77	77	76	76	76	76	77	76
40°	78	78	78	78	78	78	78	78
42.5°	81	81	80	80	80	80	81	80
45°	83	83	83	83	83	83	84	83
47.5°	86	86	85	86	86	85	86	86
50°	89	89	88	88	88	88	89	88
52.5°	91	91	90	91	91	90	91	91
55°	93	93	92	93	93	93	94	93
57.5°	95	95	94	95	95	95	96	95
60°	97	97	96	97	97	96	97	97
62.5°	99	99	98	99	98	98	99	98
65°	100	100	99	100	100	99	100	100
67.5°	101	101	100	101	100	100	101	101
70°	101	101	100	101	101	101	102	101
72.5°	101	101	100	102	101	101	102	101
75°	101	101	100	102	101	101	102	101
77.5°	101	101	100	101	101	101	101	101
80°	100	100	99	101	100	100	101	100
82.5°	99	99	98	100	99	99	100	99
85°	98	98	97	98	98	98	99	98
87.5°	97	97	96	97	97	97	97	97
90°	96	96	94	96	95	95	96	95
92.5°	94	94	93	94	94	94	95	94
95°	93	93	92	93	92	93	93	92
97.5°	91	91	90	91	90	91	91	91
100°	89	89	88	89	88	89	89	89
102.5°	87	87	86	87	87	87	87	87
105°	85	85	84	85	84	85	85	85
107.5°	83	82	82	82	82	82	83	82
110°	80	80	79	80	80	80	80	80





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	77	77	77	77	77	77	78	77
115°	75	75	74	75	75	75	75	75
117.5°	72	72	71	72	72	72	73	72
120°	69	69	69	69	69	69	70	69
122.5°	66	66	66	66	66	66	67	66
125°	63	63	63	63	63	63	64	63
127.5°	60	60	60	60	60	60	61	60
130°	57	57	56	57	57	57	57	57
132.5°	54	54	53	54	54	54	54	54
135°	50	50	50	50	50	50	51	50
137.5°	47	47	46	47	47	47	47	47
140°	43	43	43	43	43	43	44	43
142.5°	39	39	39	39	39	39	40	39
145°	36	36	36	36	36	36	36	36
147.5°	32	32	32	32	32	32	33	32
150°	28	28	28	28	28	28	29	28
152.5°	24	25	25	24	25	25	25	24
155°	21	21	21	21	21	21	21	21
157.5°	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0

(END OF REPORT)