

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: FAIL-SAFE

Report Number: 766704

Luminaire Tested: **QDEC-26xxxx**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: 766704  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: QDEC-26xxxx  
Description: FAIL-SAFE CLEAR 9 x 9  
Light Source: #043, #044 - (2) PHILIPS PL-C 10mm/13W/27 1800 LUMENS  
TOTAL INPUT WATTS = 36.5 AT 120 VOLTS  
Ballast/Driver: TWO ROBERTSON #SP2

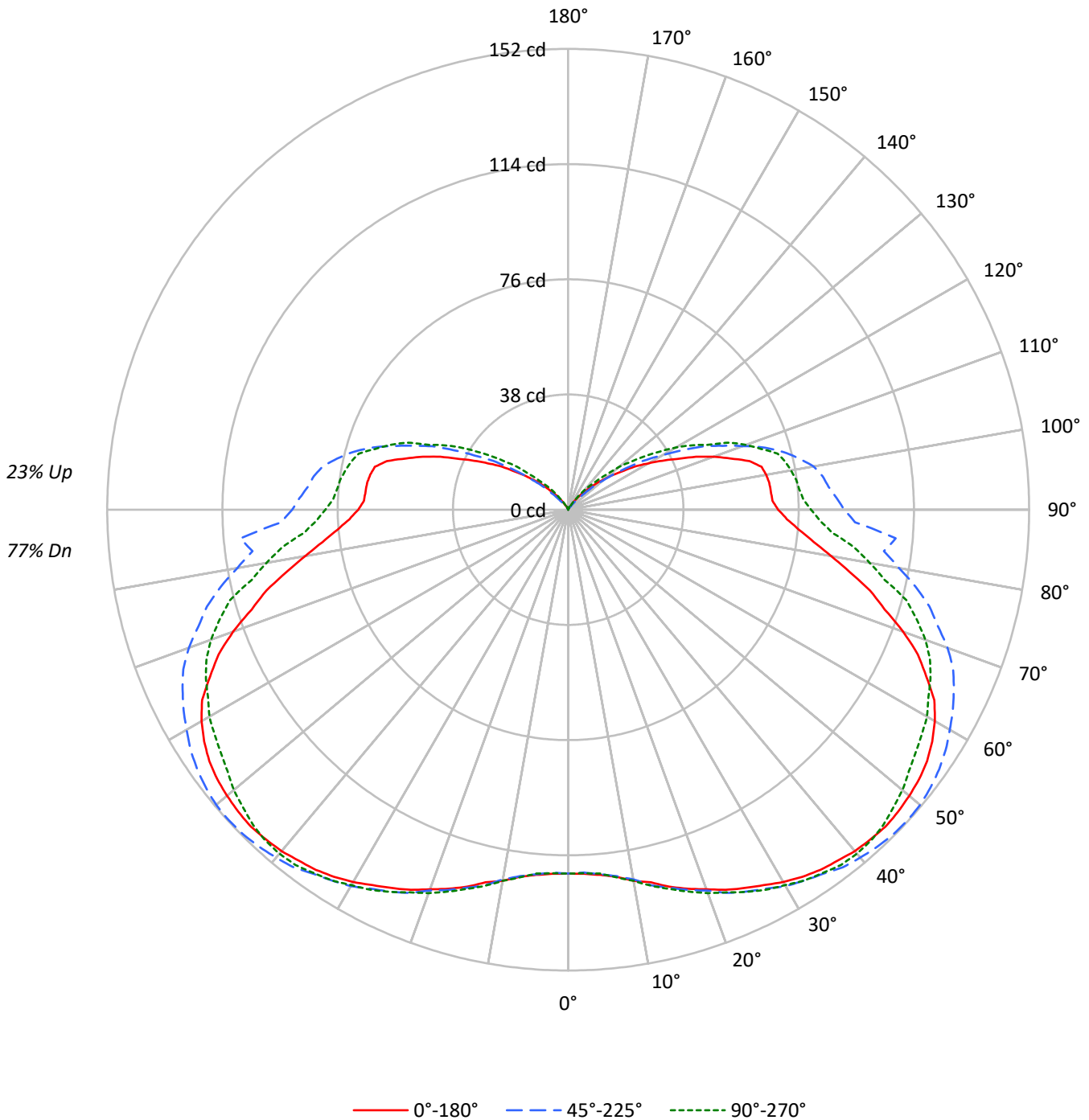
**Summary**

Lumens per Lamp: 900 (2 lamps)  
Luminaire Lumens: 1054.1 lumens  
Efficiency: 58.6%  
Efficacy: 40.5 lumens/watt  
Spacing Criteria (0/90/45): 1.81 / 1.82 / 1.96  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Semi-Direct

Input Watts (W): 26  
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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### 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	67	67	67	67	63	63	63	63	58	58	58	52	52	52	47	47	47	45
1	58	54	50	47	55	51	48	45	46	44	41	42	40	38	37	36	34	32
2	51	45	40	36	48	43	38	35	39	35	32	35	32	29	31	29	26	24
3	46	39	33	29	43	37	32	27	33	29	25	30	26	23	26	24	21	19
4	42	34	28	23	39	32	27	22	29	24	21	26	22	19	23	20	17	15
5	38	30	24	19	36	28	23	19	25	21	17	23	19	16	20	17	14	13
6	35	26	21	16	33	25	20	16	23	18	15	20	16	13	18	15	12	11
7	32	24	18	14	30	22	17	14	20	16	13	18	14	12	16	13	11	9
8	30	21	16	12	28	20	15	12	18	14	11	17	13	10	15	12	9	8
9	28	19	14	11	26	18	14	10	17	13	10	15	12	9	14	11	8	7
10	26	18	13	10	24	17	12	9	15	11	9	14	10	8	13	10	7	6

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

	0°	45°	90°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	11.6	1.1	0.6	0°	120	120	120	120	120	
10°-20°	36.7	3.5	2.0	5°	121	120	121	120	120	12
20°-30°	64.2	6.1	3.6	15°	129	129	129	129	130	37
30°-40°	91.7	8.7	5.1	25°	138	138	139	139	139	64
40°-50°	115.2	10.9	6.4	35°	145	144	147	147	146	91
50°-60°	130.4	12.4	7.2	45°	148	148	152	149	147	114
60°-70°	135.3	12.8	7.5	55°	144	148	149	142	140	129
70°-80°	123.9	11.8	6.9	65°	130	139	140	138	132	129
80°-90°	103.0	9.8	5.7	75°	103	114	123	124	116	108
90°-100°	88.7	8.4	4.9	85°	76	94	108	97	87	65
100°-110°	73.4	7.0	4.1	90°	69	86	91	90	80	38
110°-120°	46.5	4.4	2.6	95°	67	81	86	86	76	55
120°-130°	22.8	2.2	1.3	105°	62	65	74	75	72	64
130°-140°	8.3	0.8	0.5	115°	40	40	50	51	51	40
140°-150°	1.8	0.2	0.1	125°	22	20	25	28	31	21
150°-160°	0.3	0.0	0.0	135°	10	9	8	12	14	8
160°-170°	0.1	0.0	0.0	145°	3	2	1	3	4	2
170°-180°	0.0	0.0	0.0	155°	1	0	1	1	1	0
0°-30°	112.6	10.7	6.3	165°	0	0	0	0	0	0
0°-40°	204.2	19.4	11.3	175°	0	0	0	0	0	0
0°-60°	449.9	42.7	25.0	180°	0	0	0	0	0	0
0°-90°	812.1	77.0	45.1							
90°-120°	208.6	19.8	11.6							
90°-150°	241.6	22.9	13.4							
90°-180°	242.0	23.0	13.4							
0°-180°	1054.1	100.0	58.6							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	120.0	120.0	120.0	120.0	120.0
2.5°	120.2	120.0	119.8	119.9	120.0
5°	120.9	120.5	120.7	120.5	120.5
7.5°	122.1	121.7	121.9	121.9	122.3
10°	124.3	123.6	123.8	124.3	124.3
12.5°	125.9	126.3	126.9	126.8	127.1
15°	128.7	128.8	129.1	129.3	129.5
17.5°	131.1	131.4	131.5	131.7	132.1
20°	133.2	133.7	133.7	134.2	134.6
22.5°	135.7	135.7	136.8	136.8	136.6
25°	137.7	137.9	139.0	139.0	139.1
27.5°	139.6	139.9	140.9	141.3	141.3
30°	141.8	141.4	143.4	143.6	143.0
32.5°	143.6	143.0	145.0	145.5	145.0
35°	145.0	144.4	146.6	147.2	146.3
37.5°	145.9	145.4	148.7	148.7	147.7
40°	147.0	146.5	149.8	149.5	148.1
42.5°	147.5	147.8	150.8	149.7	147.9
45°	147.9	148.5	151.5	149.2	147.0
47.5°	147.5	149.1	151.7	148.2	145.4
50°	146.8	149.4	151.5	146.4	143.9
52.5°	145.9	149.0	150.6	144.2	141.6
55°	144.5	148.4	149.3	142.5	139.8
57.5°	142.3	147.2	147.6	141.0	138.2
60°	139.6	144.6	145.3	139.5	136.6
62.5°	136.1	142.2	143.0	138.6	133.9
65°	130.3	138.9	140.3	137.9	131.8
67.5°	124.8	133.6	137.4	136.2	129.1
70°	117.5	127.1	133.1	133.3	125.3
72.5°	109.4	121.7	127.8	129.6	120.5
75°	103.0	114.1	123.3	124.0	115.5
77.5°	95.1	108.0	117.3	117.4	106.9
80°	88.0	103.2	110.8	111.3	101.0
82.5°	81.7	97.3	105.0	103.7	95.1
85°	76.4	93.5	108.4	97.3	87.4
87.5°	72.2	90.0	94.7	92.9	83.1
90°	69.2	86.0	91.0	89.5	80.1
92.5°	67.4	83.7	88.6	86.6	77.6
95°	67.1	81.4	86.2	85.5	76.5
97.5°	66.9	78.5	84.6	83.9	75.8
100°	66.3	75.8	82.2	81.6	74.6
102.5°	65.3	71.8	78.0	79.0	73.3
105°	61.9	65.2	73.5	75.0	71.5
107.5°	56.1	59.1	68.1	69.6	66.7
110°	51.0	53.3	61.4	64.4	62.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	45.6	46.4	55.1	58.4	57.8
115°	39.5	39.6	49.5	50.9	50.6
117.5°	35.0	34.6	42.5	45.4	46.0
120°	30.6	29.0	35.8	39.3	41.1
122.5°	26.8	23.4	30.7	32.5	35.6
125°	22.5	20.5	24.9	28.2	30.6
127.5°	19.1	17.2	19.6	23.6	25.9
130°	15.9	14.1	15.1	18.9	22.0
132.5°	13.4	11.3	11.4	15.2	17.2
135°	10.4	8.8	7.7	11.8	13.8
137.5°	7.9	6.9	4.6	8.9	10.9
140°	6.4	5.3	3.1	6.9	8.8
142.5°	4.6	3.1	1.8	4.3	5.9
145°	3.0	2.1	1.3	2.8	3.8
147.5°	2.0	1.6	1.5	2.0	2.9
150°	1.1	0.8	0.9	1.1	1.4
152.5°	0.7	0.6	0.6	0.8	0.9
155°	0.7	0.5	0.6	0.7	0.9
157.5°	0.4	0.4	0.4	0.5	0.5
160°	0.7	0.7	0.6	0.7	0.9
162.5°	0.4	0.3	0.2	0.2	0.4
165°	0.2	0.1	0.0	0.2	0.2
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)