

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: 168P181

Luminaire Tested: **CFL-24-540BX-1K12**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: 168P181
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: CFL-24-540BX-1K12
Description: Fail-Safe CFL Series Luminaire with a prismatic acrylic lens.
Light Source: Five - F40BX/SPX35/RS - 3150 Lumens ea. - 40 Watts ea.
Ballast/Driver: Two Sylvania QT 2X40/120DL & One Sylvania QT 1X40/120DL

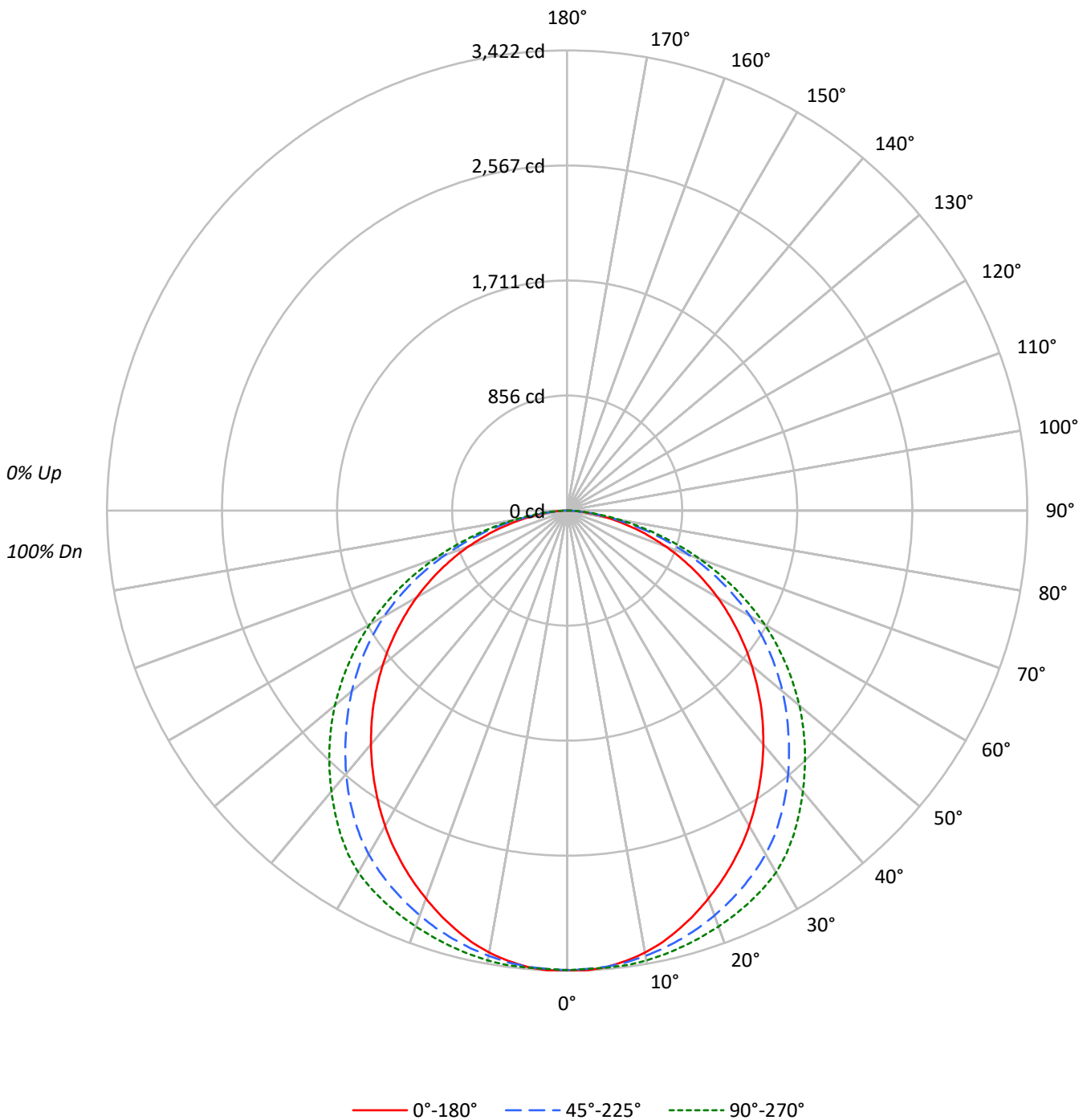
Summary

Lumens per Lamp: 3150 (5 lamps)
Luminaire Lumens: 9821.8 lumens
Efficiency: 62.4%
Efficacy: 58.5 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.34 / 1.39
Luminous Opening: Rectangular (W 1.71' x L: 1.7' x H: 0')
CIE Type: Direct

Input Watts (W): 168
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	74	74	74	74	73	73	73	73	69	69	69	66	66	66	64	64	64	62
1	68	65	62	60	66	63	61	59	61	59	57	58	57	55	56	55	54	52
2	62	56	52	49	60	55	51	48	53	50	47	51	48	46	49	47	45	43
3	56	50	44	40	55	49	44	40	47	43	39	45	41	39	43	40	38	37
4	51	44	38	34	50	43	38	34	41	37	33	40	36	33	39	35	32	31
5	47	39	34	29	46	38	33	29	37	32	29	36	32	29	35	31	28	27
6	44	35	30	26	42	35	29	25	33	29	25	32	28	25	31	28	25	23
7	40	32	26	23	39	31	26	22	30	26	22	30	25	22	29	25	22	21
8	38	29	24	20	37	29	24	20	28	23	20	27	23	20	26	23	20	18
9	35	27	22	18	34	26	21	18	26	21	18	25	21	18	24	21	18	17
10	33	25	20	16	32	24	20	16	24	19	16	23	19	16	23	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12652	12652	12652
5°	12660	12652	12682
10°	12550	12641	12772
15°	12347	12631	12853
20°	12101	12625	12968
25°	11848	12624	13127
30°	11578	12621	13284
35°	11269	12521	13285
40°	10972	12360	13181
45°	10656	12180	13096
50°	10317	12039	12990
55°	9961	11872	12808
60°	9583	11634	12567
65°	9077	11162	12100
70°	8434	10436	11335
75°	7539	9328	10200
80°	6333	7655	8487
85°	4801	5523	6160



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	323.8	3.3	2.1	0°	3417	3417	3417	3417	3417	
10°-20°	928.9	9.5	5.9	5°	3406	3398	3404	3412	3412	323
20°-30°	1416.4	14.4	9.0	15°	3221	3236	3295	3342	3353	908
30°-40°	1712.9	17.4	10.9	25°	2900	2956	3090	3187	3213	1336
40°-50°	1770.9	18.0	11.2	35°	2493	2579	2770	2895	2939	1560
50°-60°	1606.5	16.4	10.2	45°	2035	2130	2326	2458	2501	1569
60°-70°	1225.1	12.5	7.8	55°	1543	1640	1839	1949	1984	1380
70°-80°	675.9	6.9	4.3	65°	1036	1119	1274	1359	1381	1025
80°-90°	161.4	1.6	1.0	75°	527	575	652	702	713	560
90°-100°	0.0	0.0	0.0	85°	113	123	130	140	145	131
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	6
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	2669.1	27.2	16.9	165°	0	0	0	0	0	0
0°-40°	4382.1	44.6	27.8	175°	0	0	0	0	0	0
0°-60°	7759.5	79.0	49.3	180°	0	0	0	0	0	0
0°-90°	9821.8	100.0	62.4							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	9821.8	100.0	62.4							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3417	3417	3417	3417	3417
2.5°	3422	3410	3412	3415	3411
5°	3406	3398	3404	3412	3412
7.5°	3377	3373	3388	3404	3409
10°	3338	3337	3362	3389	3397
12.5°	3286	3291	3332	3368	3377
15°	3221	3236	3295	3342	3353
17.5°	3150	3175	3253	3312	3324
20°	3071	3107	3204	3276	3291
22.5°	2989	3034	3150	3234	3255
25°	2900	2956	3090	3187	3213
27.5°	2808	2873	3025	3132	3164
30°	2708	2783	2952	3070	3107
32.5°	2603	2685	2868	2991	3031
35°	2493	2579	2770	2895	2939
37.5°	2383	2467	2667	2788	2835
40°	2270	2356	2557	2683	2727
42.5°	2153	2244	2442	2572	2616
45°	2035	2130	2326	2458	2501
47.5°	1914	2012	2210	2340	2380
50°	1791	1890	2090	2215	2255
52.5°	1668	1766	1967	2083	2121
55°	1543	1640	1839	1949	1984
57.5°	1418	1512	1708	1810	1843
60°	1294	1384	1571	1666	1697
62.5°	1165	1252	1426	1516	1540
65°	1036	1119	1274	1359	1381
67.5°	908	983	1122	1197	1215
70°	779	846	964	1033	1047
72.5°	652	709	808	868	881
75°	527	575	652	702	713
77.5°	408	446	502	541	552
80°	297	324	359	389	398
82.5°	197	215	234	254	262
85°	113	123	130	140	145
87.5°	46	51	52	55	56
90°	0	0	0	0	0
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)