

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: 5602.6

Luminaire Tested: **CFS24CR-432-1K12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: 5602.6  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: CFS24CR-432-IK12  
Description: FAIL-SAFE 2X4 RECESSED FLANGE LUMINAIRE  
Light Source: FO32T8 2850 LUMENS  
Ballast/Driver: -

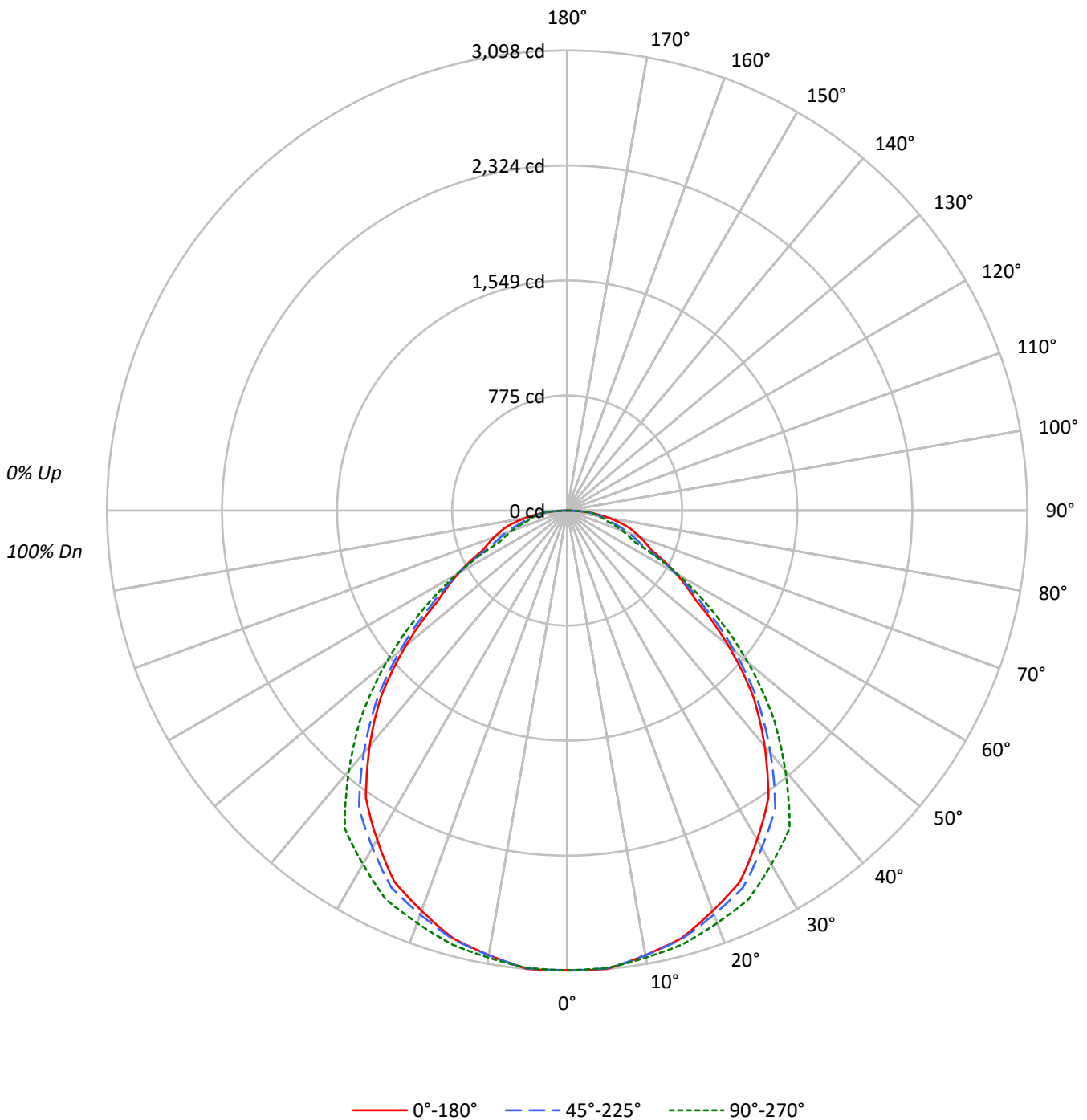
**Summary**

Lumens per Lamp: 2850 (4 lamps)  
Luminaire Lumens: 7516.7 lumens  
Efficiency: 65.9%  
Efficacy: 54.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.32 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 4' x H: 0.4')  
CIE Type: Direct

Input Watts (W): 138  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	79	79	79	79	77	77	77	77	73	73	73	70	70	70	67	67	67	66
1	72	69	67	64	71	68	66	63	65	63	61	63	61	60	60	59	58	56
2	66	61	57	54	65	60	56	53	58	55	52	56	53	51	54	51	49	48
3	61	54	49	45	59	53	49	45	51	47	44	50	46	43	48	45	43	41
4	56	49	43	39	55	48	43	39	46	42	38	45	41	38	43	40	37	36
5	52	44	38	34	50	43	38	34	42	37	33	40	36	33	39	36	33	31
6	48	40	34	30	47	39	34	30	38	33	30	37	33	29	36	32	29	28
7	45	36	31	27	44	36	30	27	35	30	26	34	29	26	33	29	26	25
8	42	33	28	24	41	33	27	24	32	27	24	31	27	24	30	26	23	22
9	39	30	25	22	38	30	25	22	29	25	21	29	24	21	28	24	21	20
10	37	28	23	20	36	28	23	20	27	23	20	27	22	19	26	22	19	18

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

	0°	45°	90°
0°	8326	8326	8326
5°	8295	8107	8069
10°	8159	7819	7801
15°	8083	7598	7601
20°	7922	7340	7385
25°	7815	7137	7227
30°	7516	6764	6940
35°	7252	6432	6700
40°	6700	5768	6010
45°	6134	5104	5326
50°	5308	4330	4501
55°	4373	3507	3632
60°	3873	2814	2736
65°	3269	2032	1731
70°	3223	1755	1472
75°	3186	1428	1170
80°	2841	1202	1039
85°	2216	903	873



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	293.6	3.9	2.6	0°	3094	3094	3094	3094	3094	
10°-20°	842.7	11.2	7.4	5°	3098	3096	3094	3093	3092	294
20°-30°	1282.0	17.1	11.2	15°	2979	2982	2986	3003	3021	837
30°-40°	1504.6	20.0	13.2	25°	2755	2777	2800	2844	2888	1256
40°-50°	1409.3	18.7	12.4	35°	2362	2402	2443	2527	2611	1453
50°-60°	1047.2	13.9	9.2	45°	1773	1794	1815	1887	1959	1350
60°-70°	643.4	8.6	5.6	55°	1065	1095	1125	1171	1216	1015
70°-80°	365.9	4.9	3.2	65°	624	592	561	533	505	678
80°-90°	132.6	1.8	1.2	75°	421	370	319	300	281	428
90°-100°	0.0	0.0	0.0	85°	154	151	148	152	158	157
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	2418.2	32.2	21.2							
0°-40°	3922.8	52.2	34.4							
0°-60°	6379.3	84.9	56.0							
0°-90°	7521.3	100.1	66.0							
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°	7516.7	100.0	65.9							



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**CANDELA DISTRIBUTION (FULL):**

	0°	45°	90°
0°	3094.2	3094.2	3094.2
5°	3097.8	3094.2	3091.5
15°	2979.3	2985.6	3020.9
25°	2754.8	2800.1	2887.9
35°	2362.0	2442.6	2610.9
45°	1772.9	1815.4	1959.3
55°	1065.2	1124.9	1216.3
65°	623.5	561.1	505.0
75°	420.8	318.6	280.6
85°	153.8	147.5	157.5
90°	0.0	0.0	0.0

(END OF REPORT)