

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: BALLABS TEST NO. 7655.0

Luminaire Tested: **CFR-12-240-IK12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: BALLABS TEST NO. 7655.0  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: CFR-12-240-IK12  
Description: 2/40W LAMP 1x4 RECESSED FLANGE LUMINAIRE  
Light Source: -  
F40T12RS/WW  
Ballast/Driver: -

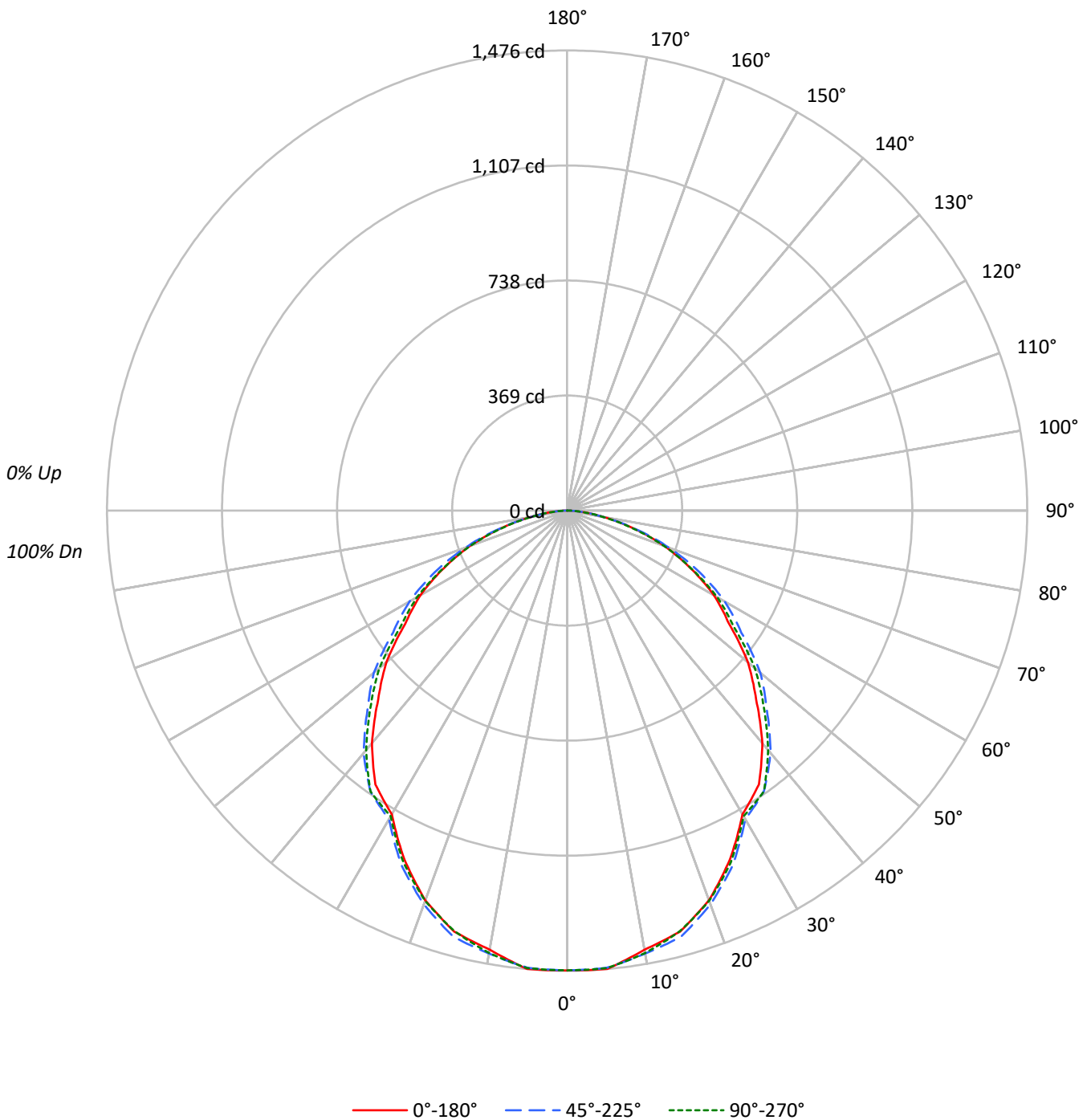
**Summary**

Lumens per Lamp: 3200 (2 lamps)  
Luminaire Lumens: 3810.8 lumens  
Efficiency: 59.5%  
Efficacy: 43.3 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.15 / 1.32  
Luminous Opening: Rectangular (W 0.71' x L: 3.81' x H: 0')  
CIE Type: Direct

Input Watts (W): 88  
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	71	71	71	71	69	69	69	69	66	66	66		63	63	63		61	61	61	60
1	65	62	60	58	63	61	59	57	58	57	55		56	55	53		54	53	52	50
2	59	54	50	47	58	53	50	47	51	48	45		49	47	44		47	45	43	42
3	54	48	43	39	53	47	43	39	45	41	38		44	40	38		42	39	37	36
4	50	43	37	33	48	42	37	33	40	36	33		39	35	32		38	34	32	31
5	46	38	33	29	44	37	32	29	36	32	28		35	31	28		34	31	28	27
6	42	34	29	25	41	34	29	25	33	28	25		32	28	25		31	27	25	23
7	39	31	26	22	38	31	26	22	30	25	22		29	25	22		28	25	22	21
8	36	28	23	20	36	28	23	20	27	23	20		27	23	20		26	22	20	18
9	34	26	21	18	33	26	21	18	25	21	18		25	21	18		24	20	18	17
10	32	24	20	16	31	24	19	16	23	19	16		23	19	16		22	19	16	15

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

	0°	45°	90°
0°	5881	5881	5881
5°	5908	5892	5896
10°	5790	5842	5834
15°	5771	5837	5767
20°	5643	5703	5652
25°	5433	5526	5473
30°	5180	5262	5212
35°	5218	5354	5354
40°	5070	5283	5221
45°	4832	5109	5030
50°	4696	5018	4876
55°	4407	4741	4539
60°	4338	4657	4434
65°	4113	4425	4142
70°	3859	4045	3847
75°	3358	3466	3297
80°	2709	2641	2618
85°	2013	1830	1876



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	139.4	3.7	2.2	0°	1475	1475	1475	1475	1475	
10°-20°	394.3	10.3	6.2	5°	1476	1472	1472	1471	1473	139
20°-30°	572.5	15.0	8.9	15°	1398	1399	1414	1399	1397	393
30°-40°	677.4	17.8	10.6	25°	1235	1247	1256	1247	1244	568
40°-50°	689.8	18.1	10.8	35°	1072	1090	1100	1094	1100	665
50°-60°	599.8	15.7	9.4	45°	857	878	906	904	892	665
60°-70°	447.8	11.8	7.0	55°	634	658	682	667	653	575
70°-80°	235.6	6.2	3.7	65°	436	451	469	452	439	432
80°-90°	54.2	1.4	0.8	75°	218	221	225	218	214	233
90°-100°	0.0	0.0	0.0	85°	44	44	40	41	41	56
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°	1106.2	29.0	17.3							
0°-40°	1783.6	46.8	27.9							
0°-60°	3073.2	80.6	48.0							
0°-90°	3810.8	100.0	59.5							
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°	3810.8	100.0	59.5							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1475	1475	1475	1475	1475
5°	1476	1472	1472	1471	1473
10°	1430	1439	1443	1441	1441
15°	1398	1399	1414	1399	1397
20°	1330	1335	1344	1334	1332
25°	1235	1247	1256	1247	1244
30°	1125	1136	1143	1134	1132
35°	1072	1090	1100	1094	1100
40°	974	987	1015	1015	1003
45°	857	878	906	904	892
50°	757	777	809	800	786
55°	634	658	682	667	653
60°	544	563	584	569	556
65°	436	451	469	452	439
70°	331	338	347	336	330
75°	218	221	225	218	214
80°	118	117	115	114	114
85°	44	44	40	41	41
90°	0	0	0	0	0

(END OF REPORT)