

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. 9188.0

Luminaire Tested: **CFG-24-432-120V-IK12-EB81-CRP**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: BALLABS TEST NO. 9188.0
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: CFG-24-432-120V-IK12-EB81-CRP
Description: 4/32W T8 LAMP 2x4 RECESSED CLEANROOM LUMINAIRE
Light Source: -
F32T8/735/RS
Ballast/Driver: ADVANCE BALLAST #REL-4P32-RH-TP

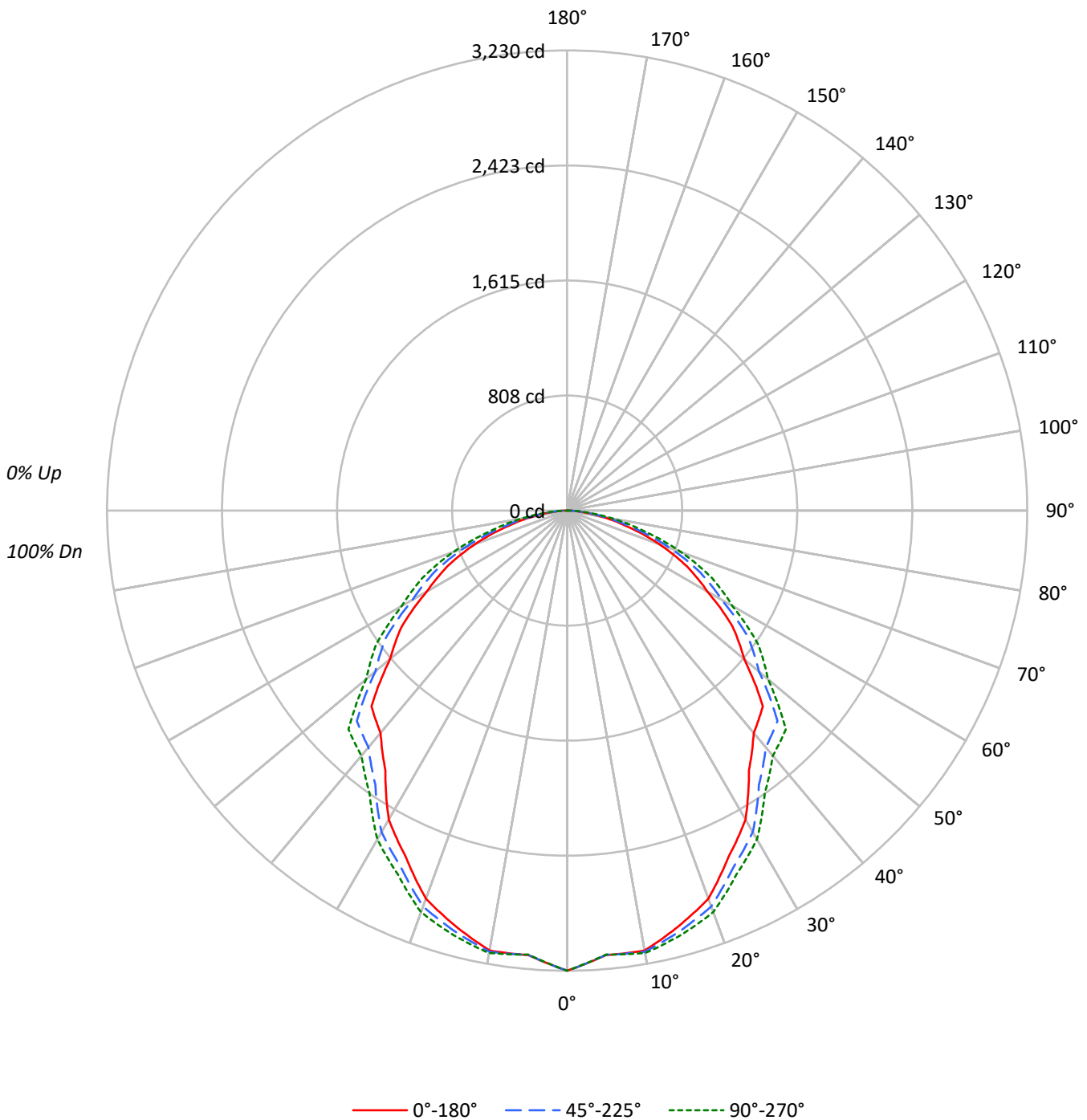
Summary

Lumens per Lamp: 2850 (4 lamps)
Luminaire Lumens: 8509.4 lumens
Efficiency: 74.6%
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.22 / 1.34
Luminous Opening: Rectangular (W 1.73' x L: 3.64' x H: 0')
CIE Type: Direct

Input Watts (W): 103
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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0													
RCR																																					
0	89	89	89	89	87	87	87	87	83	83	83	79	79	79	76	76	76	75																			
1	81	78	75	72	79	76	73	71	73	71	68	70	68	66	67	66	64	63																			
2	74	68	63	59	72	67	62	58	64	60	57	62	58	55	59	57	54	53																			
3	68	60	54	49	66	59	53	49	56	52	48	54	50	47	52	49	46	44																			
4	62	53	47	42	60	52	46	41	50	45	41	48	44	40	47	43	40	38																			
5	57	47	41	36	55	47	40	36	45	40	35	44	39	35	42	38	35	33																			
6	53	43	36	31	51	42	36	31	41	35	31	39	34	31	38	34	30	29																			
7	49	39	32	28	48	38	32	28	37	32	27	36	31	27	35	30	27	26																			
8	46	35	29	25	44	35	29	25	34	28	25	33	28	24	32	28	24	23																			
9	43	33	26	22	41	32	26	22	31	26	22	30	26	22	30	25	22	21																			
10	40	30	24	20	39	30	24	20	29	24	20	28	23	20	28	23	20	19																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5505	5505	5505
5°	5359	5355	5352
10°	5428	5441	5459
15°	5331	5393	5444
20°	5258	5363	5441
25°	5042	5194	5296
30°	4928	5129	5245
35°	4630	4886	5033
40°	4532	4826	4997
45°	4683	5033	5233
50°	4304	4662	4882
55°	4211	4609	4865
60°	3876	4271	4571
65°	3743	4166	4529
70°	3419	3842	4236
75°	2911	3260	3681
80°	2415	2719	3200
85°	1760	2014	2445



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	300.4	3.5	2.6	0°	3230	3230	3230	3230	3230	
10°-20°	862.6	10.1	7.6	5°	3132	3132	3130	3125	3128	300
20°-30°	1275.4	15.0	11.2	15°	3021	3032	3056	3077	3085	853
30°-40°	1474.7	17.3	12.9	25°	2681	2700	2762	2807	2816	1241
40°-50°	1552.3	18.2	13.6	35°	2225	2266	2348	2402	2419	1407
50°-60°	1355.8	15.9	11.9	45°	1943	1986	2088	2149	2171	1457
60°-70°	1008.9	11.9	8.8	55°	1417	1456	1551	1610	1637	1251
70°-80°	541.3	6.4	4.7	65°	928	963	1033	1097	1123	911
80°-90°	138.0	1.6	1.2	75°	442	461	495	541	559	479
90°-100°	0.0	0.0	0.0	85°	90	95	103	119	125	119
100°-110°	0.0	0.0	0.0	90°	11	11	11	12	12	
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°	2438.4	28.7	21.4							
0°-40°	3913.1	46.0	34.3							
0°-60°	6821.2	80.2	59.8							
0°-90°	8509.4	100.0	74.6							
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°	8509.4	100.0	74.6							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3230	3230	3230	3230	3230
5°	3132	3132	3130	3125	3128
10°	3136	3138	3144	3147	3154
15°	3021	3032	3056	3077	3085
20°	2899	2914	2957	2984	3000
25°	2681	2700	2762	2807	2816
30°	2504	2536	2606	2655	2665
35°	2225	2266	2348	2402	2419
40°	2037	2077	2169	2225	2246
45°	1943	1986	2088	2149	2171
50°	1623	1664	1758	1816	1841
55°	1417	1456	1551	1610	1637
60°	1137	1175	1253	1315	1341
65°	928	963	1033	1097	1123
70°	686	715	771	828	850
75°	442	461	495	541	559
80°	246	258	277	312	326
85°	90	95	103	119	125
90°	11	11	11	12	12

(END OF REPORT)