

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: P26871

Luminaire Tested: **FSR-24-4-LD4-4STD-80/84**

Test Date: 10/07/15



Test Information

Test Method: LM-79-08
Report Number: P26871
Test Lab: INNOVATION CENTER-P2
Test Date: 10/07/15
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-4STD-80/84
Description: FAILSAFE RECESSED CORRECTIONAL LED 2X4 FIXTURE
Light Source: (336) NICHIA 4000K LEDS
2UT217042A8404A
Ballast/Driver: (4) OSRAM ELECTRONIC DRIVER
OSRAM OT50W

Summary

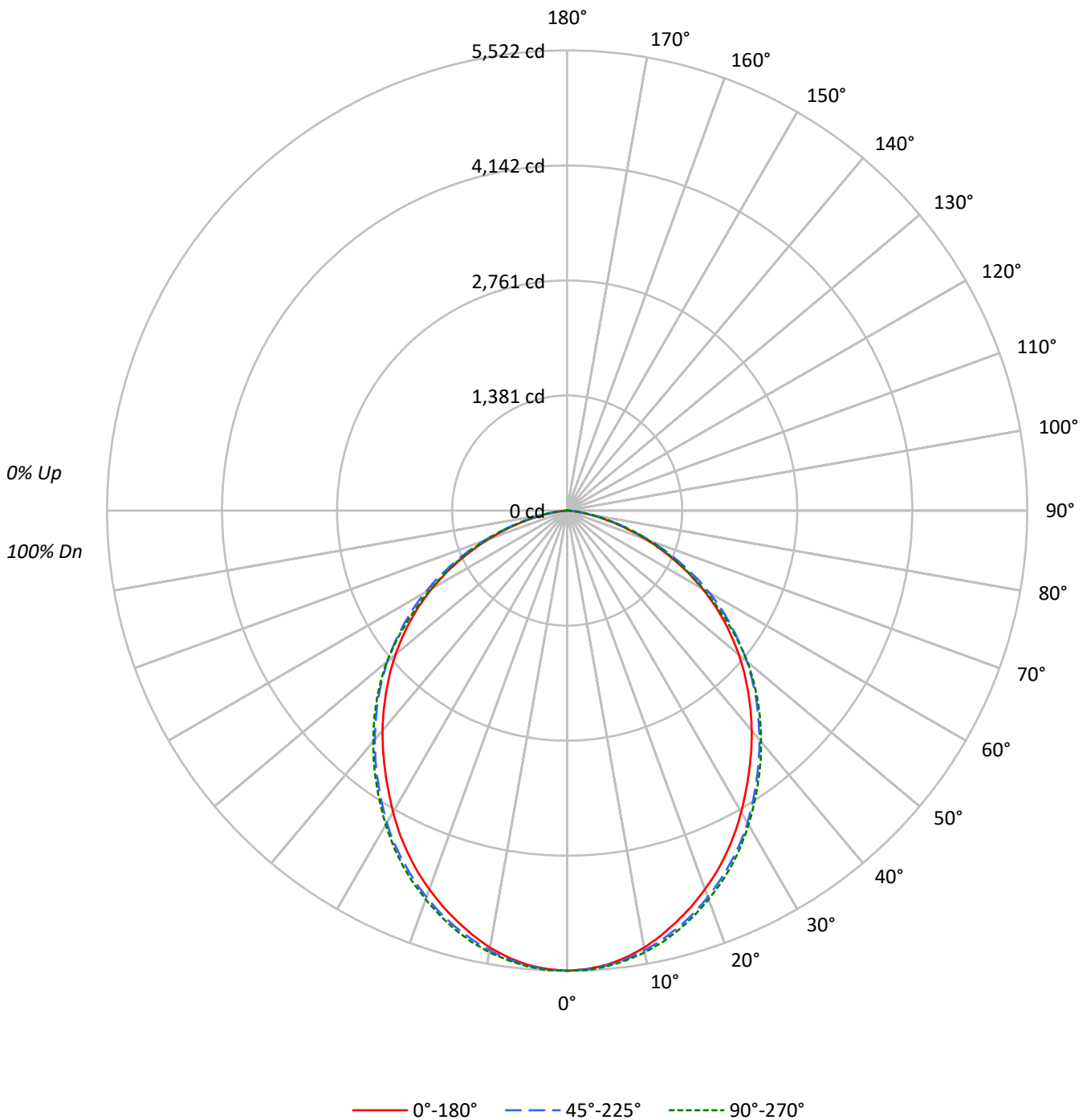
Lumens per Lamp: N/A
Luminaire Lumens: 13381.8 lumens
Efficiency: N/A
Efficacy: 97.6 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.18 / 1.29
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 137.1
Input Voltage (V): 120.02
Input Current (Ain): 1.1473
Voltage Rise (V): NR
Power Factor: 0.9984
Total Harmonic Distortion (THDi): 7.73%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	86
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	32	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7430	7430	7430
5°	7389	7401	7414
10°	7277	7320	7353
15°	7105	7206	7248
20°	6924	7068	7109
25°	6725	6905	6957
30°	6490	6724	6765
35°	6256	6504	6557
40°	6053	6307	6358
45°	5844	6106	6156
50°	5629	5894	5913
55°	5374	5630	5527
60°	5040	5304	5105
65°	4572	4823	4651
70°	3938	4182	4087
75°	3140	3353	3327
80°	2146	2340	2356
85°	1142	1312	1405



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	519.2	3.9
10°-20°	1454.7	10.9
20°-30°	2131.3	15.9
30°-40°	2458.9	18.4
40°-50°	2450.5	18.3
50°-60°	2106.6	15.7
60°-70°	1460.0	10.9
70°-80°	681.5	5.1
80°-90°	119.1	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	4105.2	30.7
0°-40°	6564.1	49.1
0°-60°	11121.1	83.1
0°-90°	13381.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13381.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5522	5522	5522	5522	5522	
5°	5471	5470	5480	5493	5489	518
15°	5101	5128	5173	5201	5203	1437
25°	4530	4571	4651	4694	4686	2084
35°	3809	3854	3960	3998	3992	2384
45°	3071	3106	3209	3242	3235	2369
55°	2291	2310	2400	2403	2356	2045
65°	1436	1454	1515	1480	1461	1421
75°	604	619	645	655	640	649
85°	74	80	85	91	91	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5522	5522	5522	5522	5522
2.5°	5507	5505	5511	5521	5520
5°	5471	5470	5480	5493	5489
7.5°	5409	5414	5429	5445	5443
10°	5326	5334	5358	5380	5382
12.5°	5221	5240	5272	5298	5301
15°	5101	5128	5173	5201	5203
17.5°	4976	5007	5063	5088	5089
20°	4836	4873	4936	4966	4965
22.5°	4690	4730	4799	4836	4832
25°	4530	4571	4651	4694	4686
27.5°	4360	4404	4498	4538	4526
30°	4177	4224	4328	4367	4354
32.5°	3990	4039	4145	4186	4174
35°	3809	3854	3960	3998	3992
37.5°	3628	3668	3778	3817	3810
40°	3446	3482	3591	3630	3620
42.5°	3259	3294	3397	3440	3430
45°	3071	3106	3209	3242	3235
47.5°	2882	2914	3013	3044	3034
50°	2689	2713	2816	2840	2825
52.5°	2491	2516	2609	2627	2593
55°	2291	2310	2400	2403	2356
57.5°	2084	2105	2190	2174	2123
60°	1873	1884	1971	1929	1897
62.5°	1657	1673	1749	1702	1673
65°	1436	1454	1515	1480	1461
67.5°	1217	1233	1295	1264	1248
70°	1001	1022	1063	1052	1039
72.5°	796	813	844	849	836
75°	604	619	645	655	640
77.5°	427	442	456	471	460
80°	277	290	302	312	304
82.5°	159	168	175	184	184
85°	74	80	85	91	91
87.5°	25	28	31	32	30
90°	0	0	0	0	0

(END OF REPORT)