

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: P26854

Luminaire Tested: **FSR-12-4-LD4-1-LO-80/84**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P26854
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-1-LO-80/84
Description: FAILSAFE RECESSED CORRECTIONAL LED 1X4 FIXTURE
Light Source: (84) NICHIA 4000K LEDS
2UT217042A8404A
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER
OSRAM OT50W

Summary

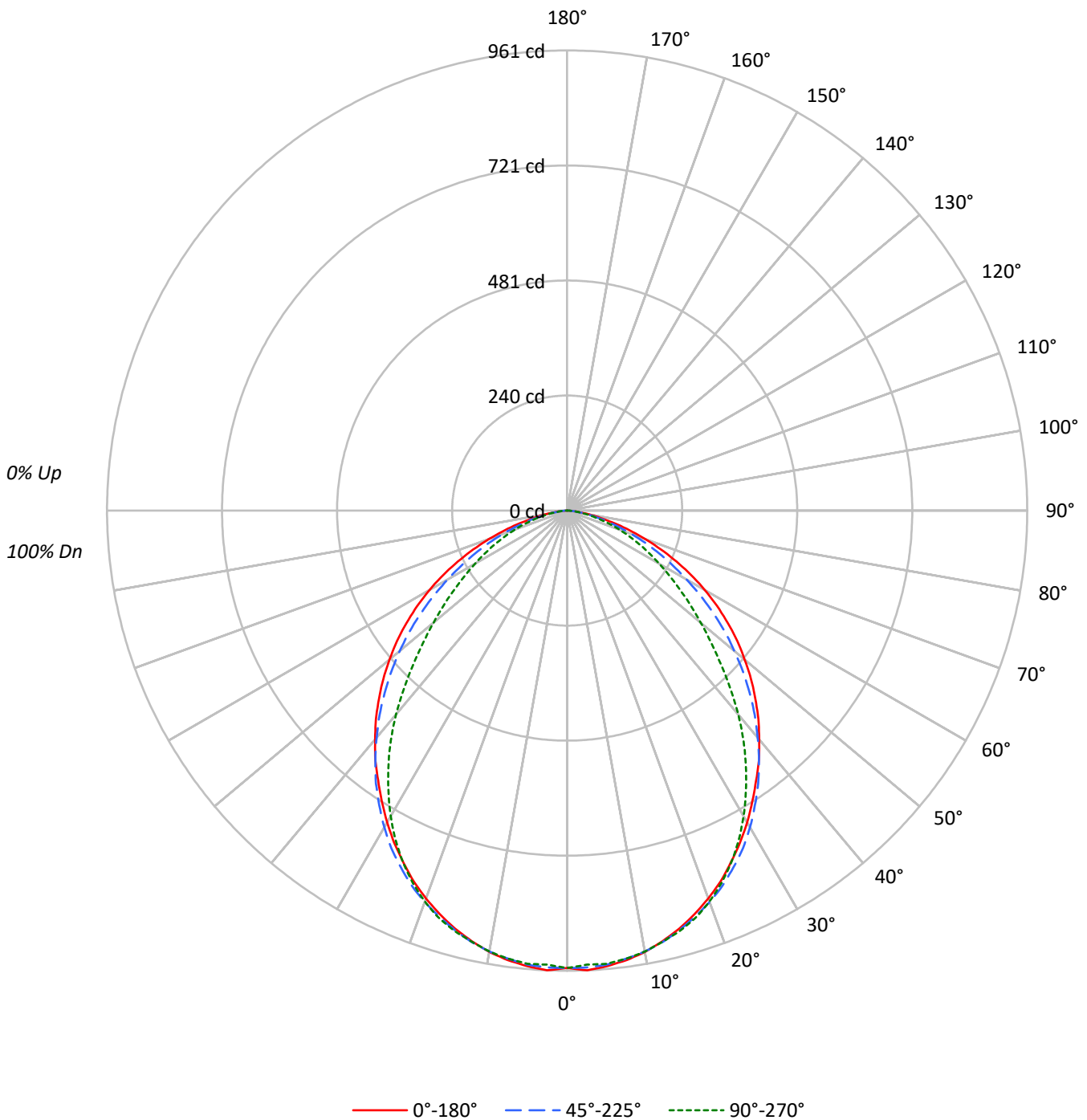
Lumens per Lamp: N/A
Luminaire Lumens: 2183.1 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.16 / 1.27
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 24
Input Voltage (V): 119.98
Input Current (Ain): 0.20119
Voltage Rise (V): NR
Power Factor: 0.9961
Total Harmonic Distortion (THDi): 7.32%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT

TEST NUMBER: P26854

CATALOG NUMBER: FSR-12-4-LD4-1-LO-80/84

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	106	102	99	107	104	100	97	99	97	94	95	93	91	92	90	88	86
2	101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	75	70	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	59	70	64	59	68	62	58	66	61	57	55
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	54	50	48
6	73	60	52	46	71	60	52	46	58	51	45	56	50	45	55	49	45	43
7	68	55	47	41	66	54	46	41	53	46	40	51	45	40	50	44	40	38
8	63	50	42	37	62	50	42	37	48	41	36	47	41	36	46	40	36	34
9	59	46	39	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31
10	56	43	35	30	54	42	35	30	41	35	30	41	34	30	40	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2570	2570	2570
5°	2580	2572	2566
10°	2558	2555	2555
15°	2518	2527	2532
20°	2468	2491	2489
25°	2405	2441	2408
30°	2337	2374	2290
35°	2260	2286	2139
40°	2192	2174	1953
45°	2116	2051	1728
50°	2026	1909	1524
55°	1924	1745	1346
60°	1787	1550	1195
65°	1605	1350	1057
70°	1361	1125	913
75°	1061	863	738
80°	728	604	558
85°	371	371	401



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.1	4.1
10°-20°	254.9	11.7
20°-30°	374.4	17.1
30°-40°	424.6	19.4
40°-50°	401.5	18.4
50°-60°	320.1	14.7
60°-70°	207.8	9.5
70°-80°	92.5	4.2
80°-90°	17.2	0.8
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°	719.4	33.0
0°-40°	1144.0	52.4
0°-60°	1865.6	85.5
0°-90°	2183.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2183.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	955	955	955	955	955	
5°	955	946	952	949	950	91
15°	904	898	907	908	909	255
25°	810	809	822	814	811	373
35°	688	690	696	664	651	431
45°	556	554	539	485	454	429
55°	410	401	372	309	287	366
65°	252	240	212	175	166	249
75°	102	97	83	74	71	111
85°	12	12	12	13	13	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	955	955	955	955	955
2.5°	961	951	955	953	949
5°	955	946	952	949	950
7.5°	947	938	944	943	944
10°	936	928	935	934	935
12.5°	921	914	923	921	922
15°	904	898	907	908	909
17.5°	884	879	889	890	892
20°	862	859	870	868	869
22.5°	838	836	848	842	842
25°	810	809	822	814	811
27.5°	782	782	795	783	776
30°	752	752	764	746	737
32.5°	720	721	730	706	695
35°	688	690	696	664	651
37.5°	658	657	658	621	605
40°	624	624	619	578	556
42.5°	591	590	580	533	505
45°	556	554	539	485	454
47.5°	521	518	498	436	407
50°	484	480	456	391	364
52.5°	448	441	415	347	325
55°	410	401	372	309	287
57.5°	371	362	330	272	253
60°	332	321	288	238	222
62.5°	292	280	249	206	193
65°	252	240	212	175	166
67.5°	212	201	176	148	140
70°	173	164	143	122	116
72.5°	136	129	112	97	93
75°	102	97	83	74	71
77.5°	72	69	59	54	52
80°	47	44	39	37	36
82.5°	27	26	23	23	22
85°	12	12	12	13	13
87.5°	4	5	7	8	8
90°	0	0	0	0	0

(END OF REPORT)