

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: P26853

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P26853
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-STD-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

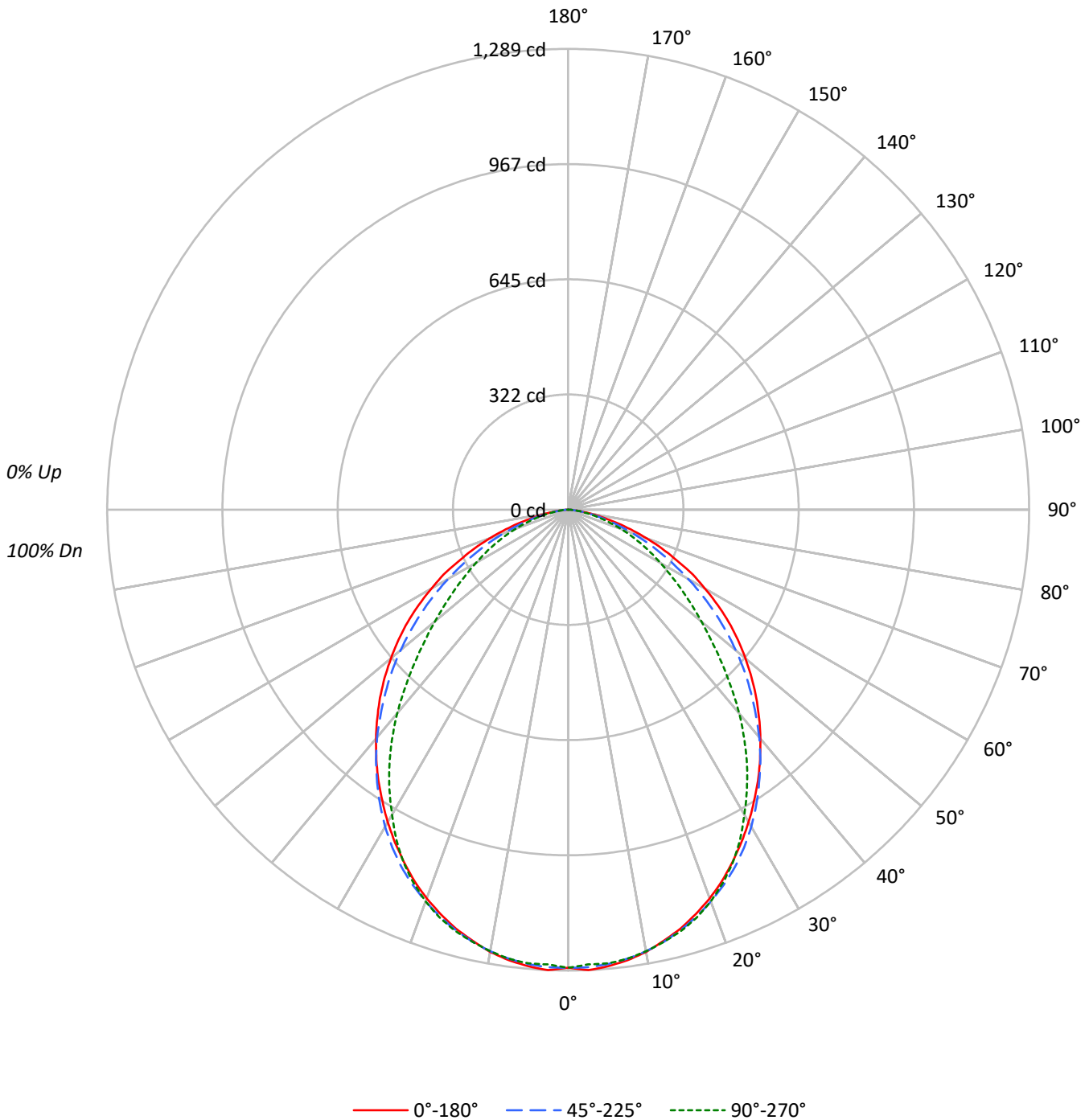
Lumens per Lamp: N/A
Luminaire Lumens: 2927.4 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.15 / 1.27
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 34.2
Input Voltage (V): 120.09
Input Current (Ain): 0.28628
Voltage Rise (V): NR
Power Factor: 0.9984
Total Harmonic Distortion (THDi): 7.48%
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	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					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	69	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°	3447	3447	3447
5°	3463	3447	3441
10°	3432	3427	3427
15°	3379	3390	3399
20°	3313	3339	3339
25°	3227	3275	3233
30°	3135	3182	3061
35°	3039	3058	2865
40°	2937	2919	2614
45°	2831	2748	2314
50°	2709	2562	2035
55°	2571	2341	1802
60°	2379	2088	1598
65°	2127	1808	1426
70°	1825	1495	1227
75°	1424	1164	988
80°	976	821	744
85°	494	525	556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.9	4.1
10°-20°	341.8	11.7
20°-30°	501.9	17.1
30°-40°	569.4	19.4
40°-50°	538.1	18.4
50°-60°	429.3	14.7
60°-70°	278.8	9.5
70°-80°	124.1	4.2
80°-90°	23.2	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°	964.6	33.0
0°-40°	1534.0	52.4
0°-60°	2501.4	85.4
0°-90°	2927.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2927.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1281	1281	1281	1281	1281	
5°	1282	1268	1276	1273	1274	122
15°	1213	1203	1217	1216	1220	342
25°	1087	1085	1103	1091	1089	501
35°	925	926	931	890	872	578
45°	744	744	722	648	608	573
55°	548	540	499	416	384	488
65°	334	322	284	237	224	333
75°	137	131	112	99	95	149
85°	16	17	17	18	18	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1281	1281	1281	1281	1281
2.5°	1289	1275	1281	1279	1273
5°	1282	1268	1276	1273	1274
7.5°	1271	1258	1267	1265	1267
10°	1256	1244	1254	1253	1254
12.5°	1235	1225	1238	1236	1238
15°	1213	1203	1217	1216	1220
17.5°	1186	1179	1193	1194	1196
20°	1157	1151	1166	1163	1166
22.5°	1124	1119	1136	1129	1130
25°	1087	1085	1103	1091	1089
27.5°	1049	1049	1065	1048	1041
30°	1009	1009	1024	999	985
32.5°	967	968	979	947	930
35°	925	926	931	890	872
37.5°	881	882	883	834	809
40°	836	838	831	775	744
42.5°	790	792	776	713	675
45°	744	744	722	648	608
47.5°	696	696	668	587	544
50°	647	644	612	524	486
52.5°	598	592	555	468	433
55°	548	540	499	416	384
57.5°	495	485	443	366	338
60°	442	430	388	320	297
62.5°	393	375	334	276	260
65°	334	322	284	237	224
67.5°	284	270	236	199	189
70°	232	220	190	163	156
72.5°	183	174	150	130	124
75°	137	131	112	99	95
77.5°	97	92	80	72	70
80°	63	60	53	49	48
82.5°	36	34	32	30	30
85°	16	17	17	18	18
87.5°	5	7	9	10	11
90°	0	0	0	0	0

(END OF REPORT)