

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P558736

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558736
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-1-LD4-1LO-40-UNV-82-84-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 464.0 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

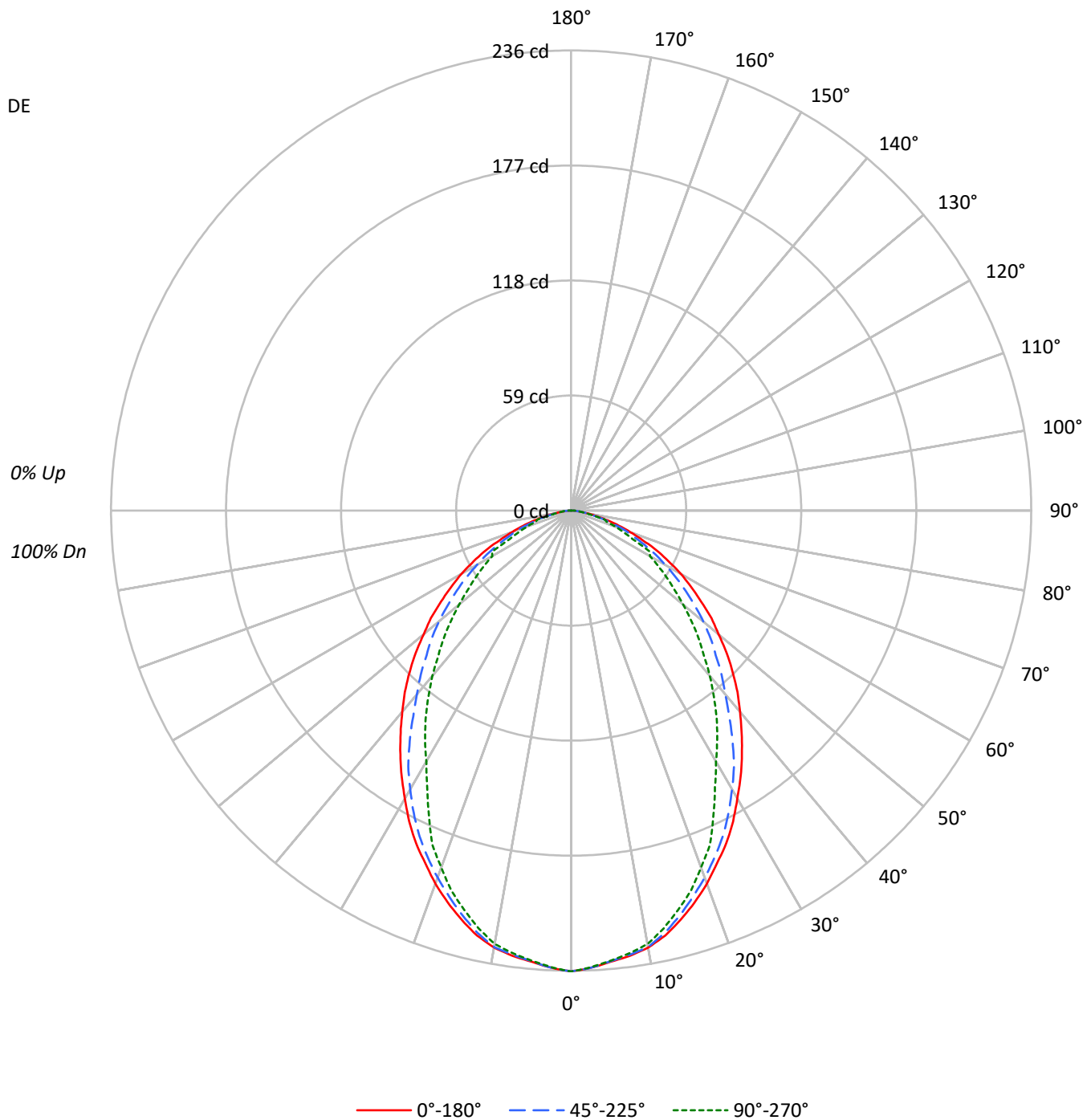
Input Watts (W): 5.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	35	44	39	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2545	2545	2545
5°	2510	2507	2504
10°	2488	2484	2467
15°	2420	2396	2362
20°	2332	2294	2231
25°	2236	2188	2051
30°	2119	2051	1847
35°	2007	1896	1710
40°	1893	1728	1555
45°	1784	1597	1407
50°	1651	1482	1254
55°	1528	1344	1122
60°	1399	1199	1005
65°	1233	1052	891
70°	1013	919	755
75°	807	703	740
80°	539	508	477
85°	333	408	469

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1784 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.0	4.7
10°-20°	60.4	13.0
20°-30°	83.6	18.0
30°-40°	89.1	19.2
40°-50°	81.3	17.5
50°-60°	63.7	13.7
60°-70°	41.5	8.9
70°-80°	18.4	4.0
80°-90°	4.0	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°	166.0	35.8
0°-40°	255.1	55.0
0°-60°	400.1	86.2
0°-90°	464.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	464.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	236	236	236	236	236	
5°	232	232	232	232	232	22
15°	217	217	215	213	212	61
25°	188	187	184	178	173	86
35°	153	152	144	133	130	95
45°	117	115	105	96	92	90
55°	81	79	72	63	60	73
65°	48	46	41	42	35	48
75°	19	18	17	16	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	236.4	236.4	236.4	236.4	236.4
2.5°	234.7	234.7	234.7	234.4	234.4
5°	232.3	232.0	232.0	231.7	231.7
7.5°	230.3	230.1	229.8	229.5	229.0
10°	227.6	227.6	227.3	226.0	225.7
12.5°	223.2	223.0	221.9	220.0	219.4
15°	217.2	217.2	215.0	212.9	212.0
17.5°	210.7	210.4	207.7	205.5	204.4
20°	203.6	203.0	200.3	196.7	194.8
22.5°	195.6	195.6	192.4	187.7	185.8
25°	188.3	187.2	184.2	177.6	172.7
27.5°	179.8	178.2	174.9	165.6	159.8
30°	170.5	169.7	165.0	153.0	148.6
32.5°	161.8	160.4	155.5	142.9	139.4
35°	152.7	151.6	144.3	133.3	130.1
37.5°	143.7	142.4	133.1	124.3	120.2
40°	134.7	133.1	123.0	115.0	110.7
42.5°	126.2	124.1	114.2	105.7	100.8
45°	117.2	114.8	104.9	96.2	92.4
47.5°	108.2	106.0	97.0	88.0	83.6
50°	98.6	96.7	88.5	79.5	74.9
52.5°	90.7	87.7	79.8	70.8	66.9
55°	81.4	79.0	71.6	63.1	59.8
57.5°	73.0	70.5	63.7	55.7	53.0
60°	65.0	61.5	55.7	48.9	46.7
62.5°	56.3	53.6	48.6	42.9	45.6
65°	48.4	45.6	41.3	42.1	35.0
67.5°	39.6	38.3	34.4	30.6	29.5
70°	32.2	30.6	29.2	25.1	24.0
72.5°	25.7	24.0	22.1	19.9	19.1
75°	19.4	18.0	16.9	16.1	17.8
77.5°	13.4	12.8	12.0	11.2	10.9
80°	8.7	8.5	8.2	7.9	7.7
82.5°	5.2	5.2	5.2	5.2	5.2
85°	2.7	3.0	3.3	3.6	3.8
87.5°	1.6	1.6	1.9	2.2	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)