

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: P559124

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559124
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-LD4-2HI-40-UNV-82-86-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1476.0 lumens
Efficiency: N/A
Efficacy: 68.3 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

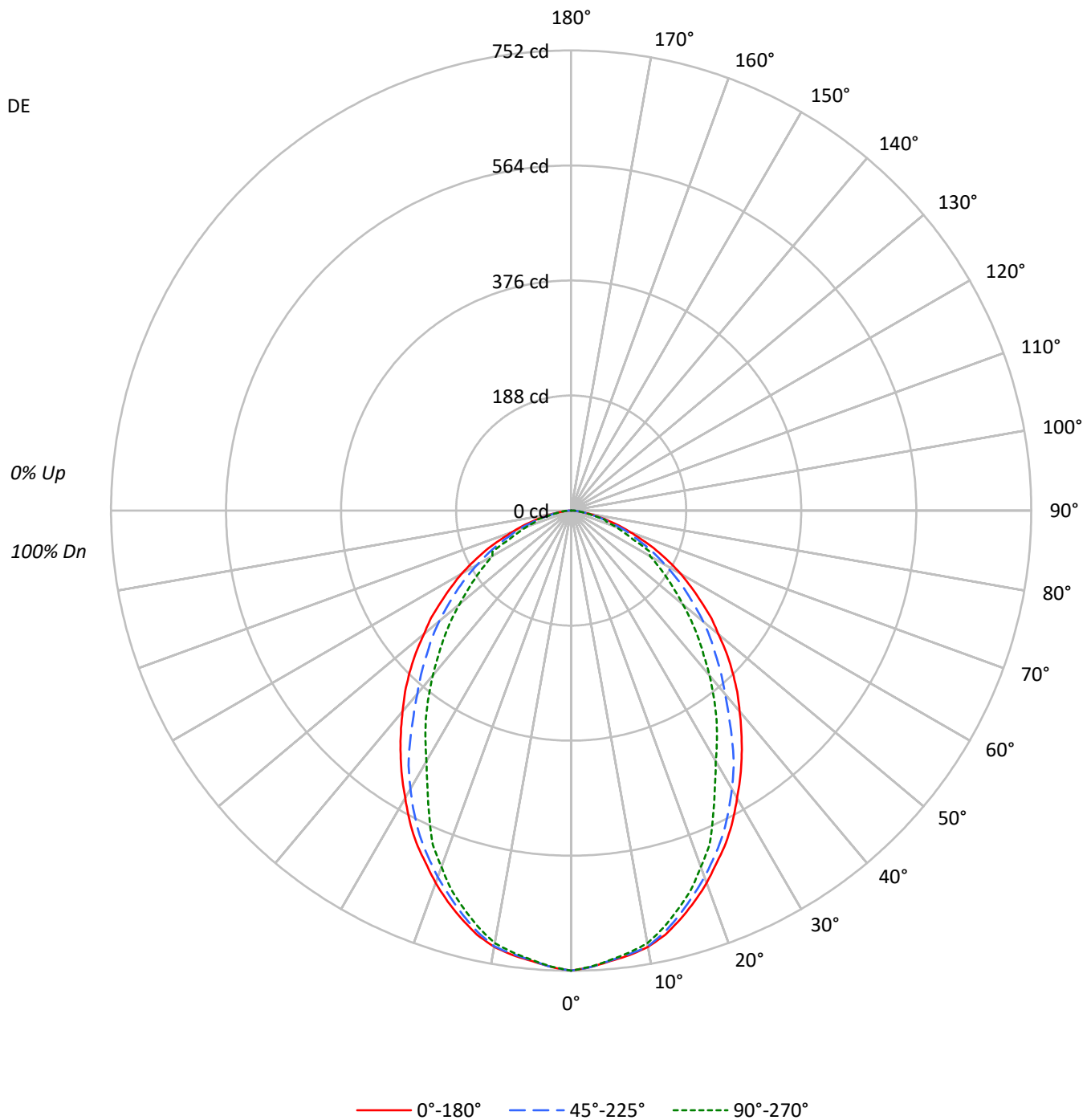
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8093	8093	8093
5°	7983	7973	7964
10°	7913	7905	7848
15°	7700	7623	7516
20°	7418	7298	7098
25°	7113	6957	6524
30°	6742	6525	5876
35°	6385	6030	5436
40°	6021	5495	4946
45°	5676	5081	4472
50°	5255	4716	3989
55°	4860	4273	3573
60°	4454	3817	3199
65°	3917	3342	2835
70°	3229	2927	2408
75°	2566	2242	2350
80°	1723	1618	1506
85°	1074	1284	1507

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5676 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.0	4.7
10°-20°	192.1	13.0
20°-30°	265.9	18.0
30°-40°	283.5	19.2
40°-50°	258.7	17.5
50°-60°	202.7	13.7
60°-70°	132.1	8.9
70°-80°	58.5	4.0
80°-90°	12.6	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°	528.0	35.8
0°-40°	811.5	55.0
0°-60°	1272.8	86.2
0°-90°	1476.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1476.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	739	738	738	737	737	70
15°	691	691	684	677	674	194
25°	599	595	586	565	549	275
35°	486	482	459	424	414	304
45°	373	365	334	306	294	287
55°	259	251	228	201	190	232
65°	154	145	131	134	111	152
75°	62	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	751.9	751.9	751.9	751.9	751.9
2.5°	746.6	746.6	746.6	745.8	745.8
5°	738.8	737.9	737.9	737.1	737.1
7.5°	732.7	731.9	731.0	730.1	728.4
10°	724.0	724.0	723.2	718.8	718.0
12.5°	710.1	709.3	705.8	699.7	698.0
15°	691.0	691.0	684.1	677.1	674.5
17.5°	670.2	669.3	660.6	653.6	650.2
20°	647.6	645.8	637.1	625.8	619.7
22.5°	622.3	622.3	611.9	597.1	591.1
25°	598.9	595.4	585.8	565.0	549.3
27.5°	571.9	566.7	556.3	526.7	508.5
30°	542.4	539.8	525.0	486.7	472.8
32.5°	514.6	510.2	494.6	454.6	443.3
35°	485.9	482.4	458.9	424.2	413.7
37.5°	457.2	452.9	423.3	395.5	382.4
40°	428.5	423.3	391.1	365.9	352.0
42.5°	401.6	394.6	363.3	336.4	320.7
45°	372.9	365.1	333.8	306.0	293.8
47.5°	344.2	337.2	308.6	279.9	266.0
50°	313.8	307.7	281.6	252.9	238.2
52.5°	288.6	279.0	253.8	225.1	213.0
55°	259.0	251.2	227.7	200.8	190.4
57.5°	232.1	224.3	202.5	177.3	168.6
60°	206.9	195.6	177.3	155.6	148.6
62.5°	179.1	170.4	154.7	136.5	145.2
65°	153.8	145.2	131.2	133.9	111.3
67.5°	126.0	121.7	109.5	97.3	93.9
70°	102.6	97.3	93.0	80.0	76.5
72.5°	81.7	76.5	70.4	63.5	60.8
75°	61.7	57.4	53.9	51.3	56.5
77.5°	42.6	40.9	38.2	35.6	34.8
80°	27.8	26.9	26.1	25.2	24.3
82.5°	16.5	16.5	16.5	16.5	16.5
85°	8.7	9.6	10.4	11.3	12.2
87.5°	5.2	5.2	6.1	7.0	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)