

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: P559696

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559696
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-12-2-LD4-1HI-40-UNV-82-84-EDD-90
Description: 1X2 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: 1477.0 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

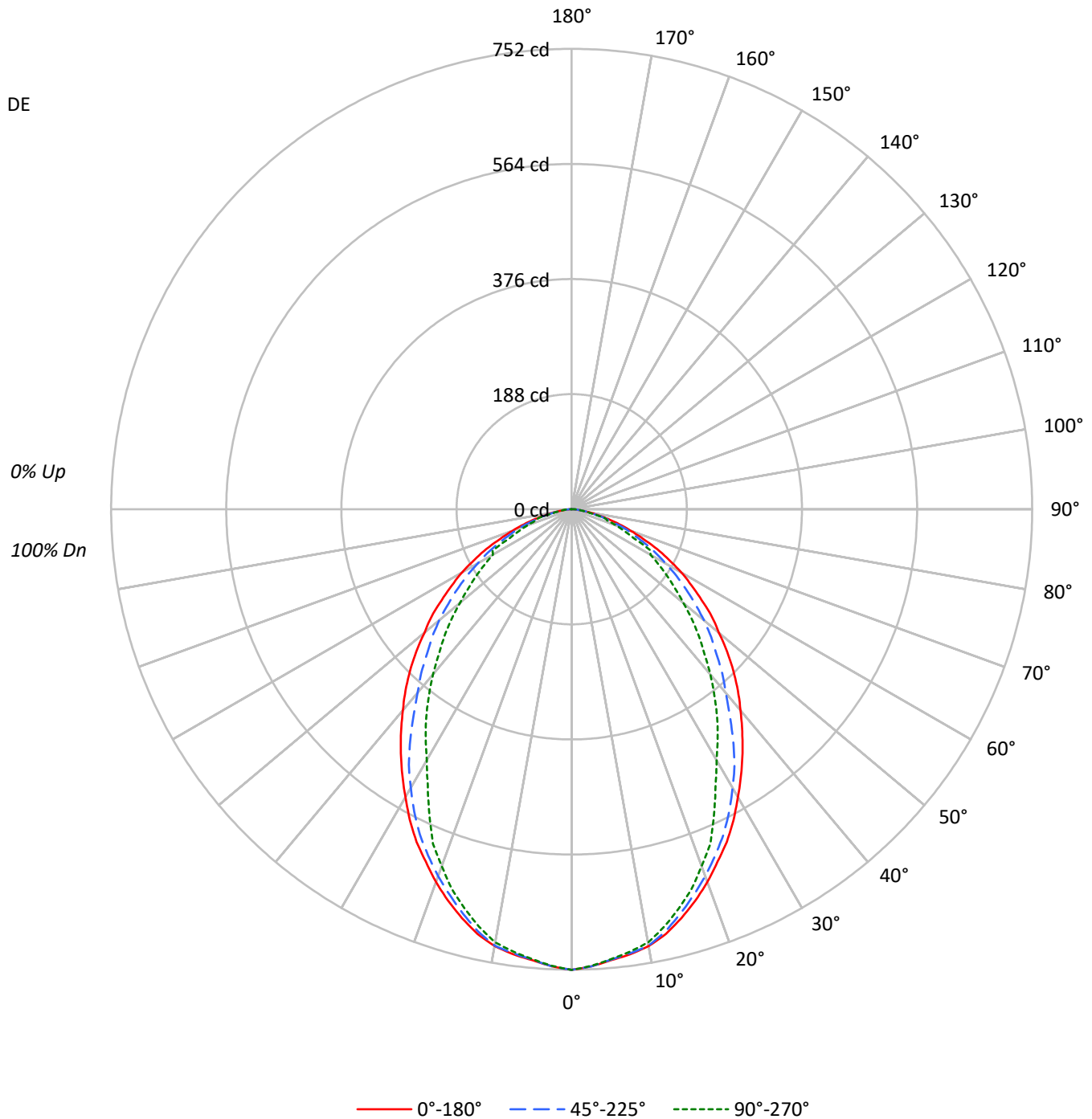
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4049	4049	4049
5°	3994	3989	3985
10°	3959	3955	3926
15°	3853	3814	3761
20°	3711	3652	3552
25°	3559	3481	3264
30°	3373	3265	2941
35°	3194	3017	2720
40°	3013	2750	2475
45°	2840	2542	2238
50°	2629	2359	1995
55°	2432	2138	1787
60°	2228	1910	1601
65°	1961	1672	1417
70°	1614	1465	1204
75°	1285	1121	1175
80°	862	809	756
85°	537	642	753

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2840 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.0	4.7
10°-20°	192.2	13.0
20°-30°	266.1	18.0
30°-40°	283.7	19.2
40°-50°	258.9	17.5
50°-60°	202.8	13.7
60°-70°	132.2	8.9
70°-80°	58.6	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°	528.3	35.8
0°-40°	812.1	55.0
0°-60°	1273.7	86.2
0°-90°	1477.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1477.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	739	738	738	738	738	70
15°	692	692	684	678	675	194
25°	599	596	586	565	550	275
35°	486	483	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°	752.4	752.4	752.4	752.4	752.4
2.5°	747.1	747.1	747.1	746.3	746.3
5°	739.3	738.4	738.4	737.6	737.6
7.5°	733.2	732.4	731.5	730.6	728.9
10°	724.5	724.5	723.7	719.3	718.4
12.5°	710.6	709.7	706.3	700.2	698.4
15°	691.5	691.5	684.5	677.6	675.0
17.5°	670.6	669.7	661.0	654.1	650.6
20°	648.0	646.3	637.6	626.2	620.2
22.5°	622.8	622.8	612.3	597.5	591.5
25°	599.3	595.8	586.2	565.4	549.7
27.5°	572.3	567.1	556.7	527.1	508.8
30°	542.7	540.1	525.4	487.1	473.2
32.5°	514.9	510.6	494.9	454.9	443.6
35°	486.2	482.7	459.2	424.5	414.0
37.5°	457.5	453.2	423.6	395.8	382.7
40°	428.8	423.6	391.4	366.2	352.3
42.5°	401.8	394.9	363.6	336.6	321.0
45°	373.1	365.3	334.0	306.2	294.0
47.5°	344.4	337.5	308.8	280.1	266.2
50°	314.0	307.9	281.8	253.1	238.3
52.5°	288.8	279.2	254.0	225.3	213.1
55°	259.2	251.4	227.9	200.9	190.5
57.5°	232.2	224.4	202.7	177.4	168.7
60°	207.0	195.7	177.4	155.7	148.7
62.5°	179.2	170.5	154.8	136.6	145.3
65°	154.0	145.3	131.3	133.9	111.3
67.5°	126.1	121.8	109.6	97.4	93.9
70°	102.6	97.4	93.1	80.0	76.5
72.5°	81.8	76.5	70.5	63.5	60.9
75°	61.8	57.4	53.9	51.3	56.5
77.5°	42.6	40.9	38.3	35.7	34.8
80°	27.8	27.0	26.1	25.2	24.4
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)