

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: P563088

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563088
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-24-4-LD4-3HI-35-UNV-82-84-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11174.0 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

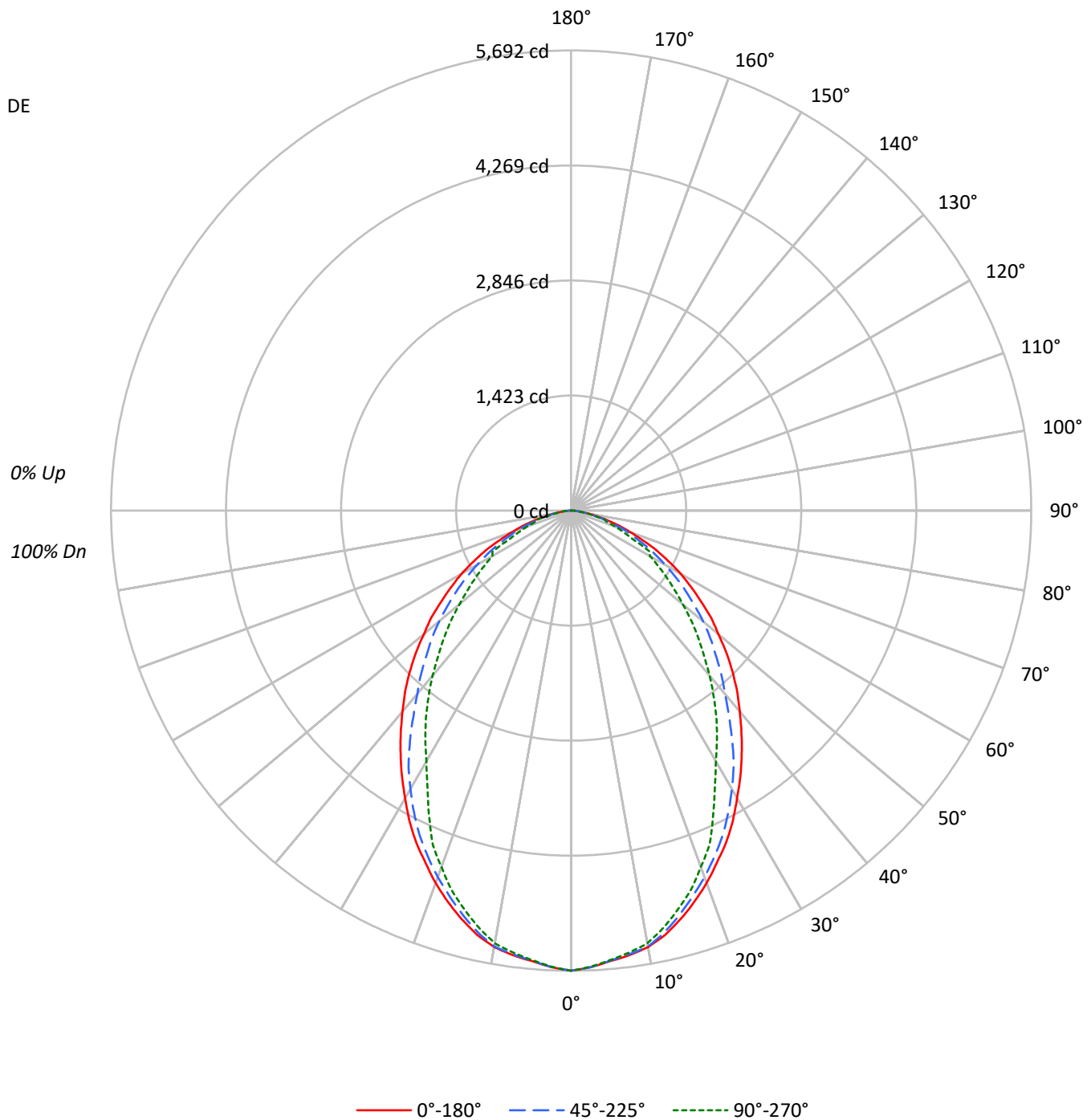
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7658	7658	7658
5°	7554	7545	7537
10°	7489	7480	7426
15°	7287	7214	7113
20°	7019	6906	6718
25°	6731	6584	6174
30°	6379	6175	5561
35°	6042	5707	5145
40°	5698	5201	4681
45°	5371	4808	4232
50°	4972	4463	3774
55°	4600	4044	3381
60°	4214	3612	3028
65°	3708	3163	2682
70°	3055	2770	2278
75°	2429	2121	2223
80°	1632	1530	1427
85°	1016	1220	1422

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5371 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	529.8	4.7
10°-20°	1454.1	13.0
20°-30°	2013.1	18.0
30°-40°	2146.6	19.2
40°-50°	1958.3	17.5
50°-60°	1534.2	13.7
60°-70°	999.9	8.9
70°-80°	443.0	4.0
80°-90°	95.1	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°	3997.0	35.8
0°-40°	6143.6	55.0
0°-60°	9636.0	86.2
0°-90°	11174.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11174.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5692	5692	5692	5692	5692	
5°	5593	5587	5587	5580	5580	531
15°	5231	5231	5179	5126	5106	1471
25°	4534	4507	4435	4277	4159	2081
35°	3678	3652	3474	3211	3132	2300
45°	2823	2764	2527	2316	2224	2174
55°	1961	1902	1724	1520	1441	1759
65°	1165	1099	994	1013	842	1148
75°	467	434	408	388	428	501
85°	66	72	79	86	92	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5691.9	5691.9	5691.9	5691.9	5691.9
2.5°	5652.4	5652.4	5652.4	5645.8	5645.8
5°	5593.2	5586.6	5586.6	5580.0	5580.0
7.5°	5547.1	5540.5	5534.0	5527.4	5514.2
10°	5481.3	5481.3	5474.7	5441.8	5435.3
12.5°	5376.0	5369.5	5343.1	5297.1	5283.9
15°	5231.3	5231.3	5178.6	5126.0	5106.2
17.5°	5073.3	5066.8	5001.0	4948.3	4922.0
20°	4902.3	4889.1	4823.3	4737.8	4691.7
22.5°	4711.4	4711.4	4632.5	4520.6	4474.5
25°	4533.8	4507.4	4435.1	4277.1	4158.7
27.5°	4329.8	4290.3	4211.3	3987.6	3849.4
30°	4106.1	4086.3	3974.5	3684.9	3579.6
32.5°	3895.5	3862.6	3744.1	3441.5	3355.9
35°	3678.3	3652.0	3474.4	3211.1	3132.2
37.5°	3461.2	3428.3	3204.6	2994.0	2895.3
40°	3244.0	3204.6	2961.1	2770.3	2665.0
42.5°	3040.1	2987.4	2750.5	2546.5	2428.1
45°	2822.9	2763.7	2526.8	2316.2	2224.1
47.5°	2605.8	2553.1	2336.0	2118.8	2013.5
50°	2375.5	2329.4	2132.0	1914.8	1803.0
52.5°	2184.6	2112.2	1921.4	1704.3	1612.2
55°	1960.9	1901.7	1724.0	1520.0	1441.1
57.5°	1756.9	1697.7	1533.2	1342.4	1276.6
60°	1566.1	1480.5	1342.4	1177.9	1125.2
62.5°	1355.5	1289.7	1171.3	1033.1	1098.9
65°	1164.7	1098.9	993.6	1013.4	842.3
67.5°	954.1	921.2	829.1	737.0	710.7
70°	776.5	737.0	704.1	605.4	579.1
72.5°	618.5	579.1	533.0	480.4	460.6
75°	467.2	434.3	408.0	388.2	427.7
77.5°	322.4	309.3	289.5	269.8	263.2
80°	210.6	204.0	197.4	190.8	184.2
82.5°	125.0	125.0	125.0	125.0	125.0
85°	65.8	72.4	79.0	85.5	92.1
87.5°	39.5	39.5	46.1	52.6	59.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)