

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: P563081

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563081
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-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11519.0 lumens
Efficiency: N/A
Efficacy: 88.9 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

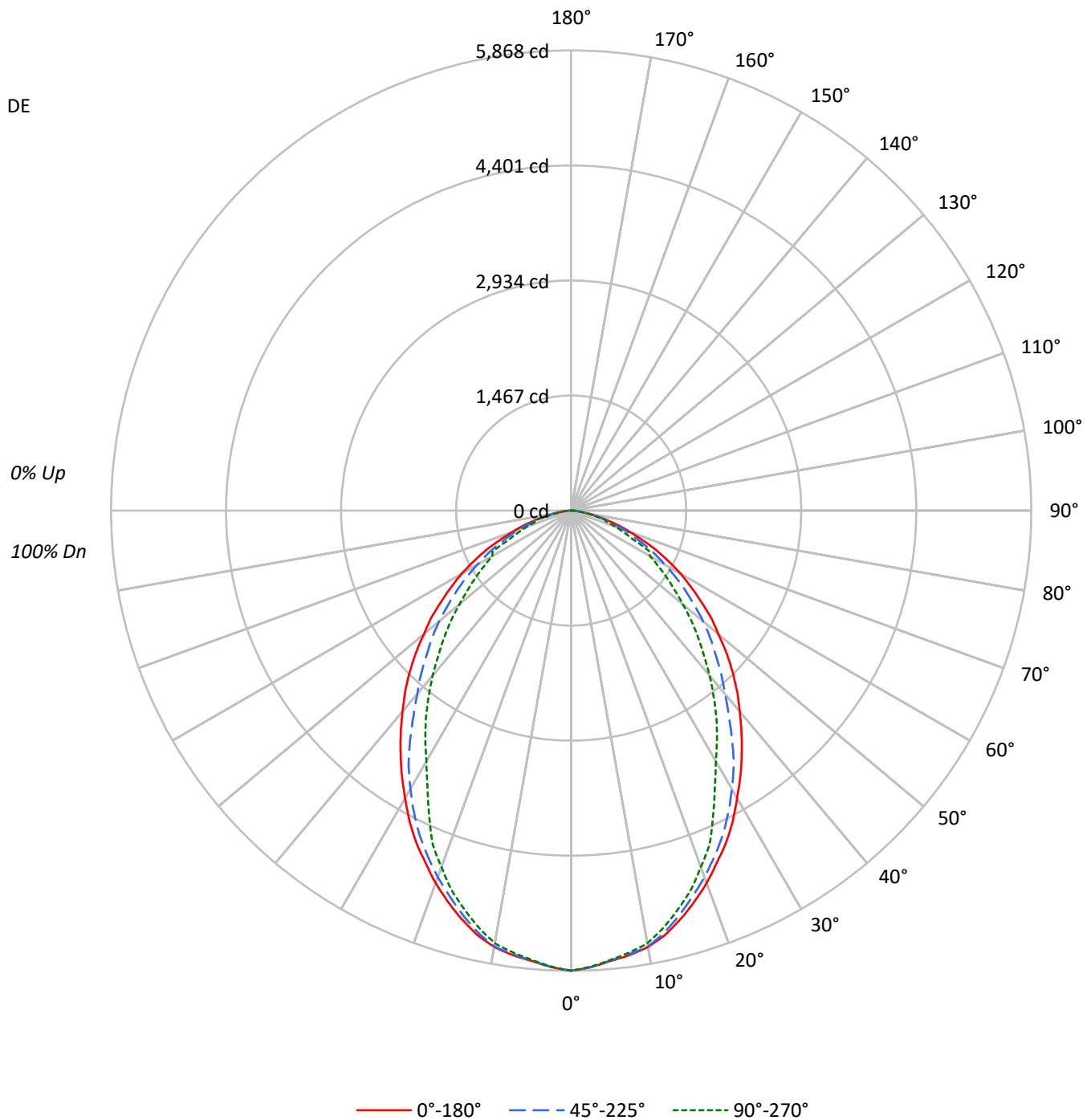
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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	34	44	38	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°	7895	7895	7895
5°	7788	7778	7769
10°	7720	7711	7655
15°	7512	7436	7332
20°	7236	7119	6925
25°	6938	6788	6365
30°	6576	6366	5733
35°	6228	5883	5304
40°	5874	5361	4825
45°	5537	4956	4363
50°	5126	4600	3890
55°	4742	4169	3485
60°	4344	3724	3122
65°	3823	3261	2764
70°	3149	2855	2348
75°	2504	2187	2292
80°	1682	1577	1471
85°	1047	1257	1467

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5537 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	546.2	4.7
10°-20°	1499.0	13.0
20°-30°	2075.3	18.0
30°-40°	2212.8	19.2
40°-50°	2018.7	17.5
50°-60°	1581.5	13.7
60°-70°	1030.7	8.9
70°-80°	456.7	4.0
80°-90°	98.1	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°	4120.4	35.8
0°-40°	6333.3	55.0
0°-60°	9933.5	86.2
0°-90°	11519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11519.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5868	5868	5868	5868	5868	
5°	5766	5759	5759	5752	5752	547
15°	5393	5393	5338	5284	5264	1516
25°	4674	4647	4572	4409	4287	2146
35°	3792	3765	3582	3310	3229	2371
45°	2910	2849	2605	2388	2293	2242
55°	2021	1960	1777	1567	1486	1813
65°	1201	1133	1024	1045	868	1183
75°	482	448	421	400	441	516
85°	68	75	81	88	95	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5867.6	5867.6	5867.6	5867.6	5867.6
2.5°	5826.9	5826.9	5826.9	5820.1	5820.1
5°	5765.9	5759.1	5759.1	5752.3	5752.3
7.5°	5718.4	5711.6	5704.8	5698.0	5684.5
10°	5650.6	5650.6	5643.8	5609.9	5603.1
12.5°	5542.0	5535.2	5508.1	5460.6	5447.1
15°	5392.8	5392.8	5338.5	5284.3	5263.9
17.5°	5230.0	5223.2	5155.4	5101.1	5074.0
20°	5053.6	5040.1	4972.2	4884.0	4836.6
22.5°	4856.9	4856.9	4775.5	4660.2	4612.7
25°	4673.7	4646.6	4572.0	4409.2	4287.1
27.5°	4463.5	4422.8	4341.4	4110.7	3968.3
30°	4232.8	4212.5	4097.2	3798.7	3690.2
32.5°	4015.8	3981.8	3859.7	3547.7	3459.5
35°	3791.9	3764.8	3581.6	3310.3	3228.9
37.5°	3568.1	3534.1	3303.5	3086.4	2984.7
40°	3344.2	3303.5	3052.5	2855.8	2747.3
42.5°	3133.9	3079.7	2835.5	2625.2	2503.1
45°	2910.1	2849.0	2604.8	2387.8	2292.8
47.5°	2686.2	2632.0	2408.1	2184.2	2075.7
50°	2448.8	2401.3	2197.8	1974.0	1858.6
52.5°	2252.1	2177.5	1980.7	1756.9	1661.9
55°	2021.4	1960.4	1777.2	1567.0	1485.6
57.5°	1811.2	1750.1	1580.5	1383.8	1316.0
60°	1614.4	1526.3	1383.8	1214.2	1160.0
62.5°	1397.4	1329.5	1207.4	1065.0	1132.8
65°	1200.7	1132.8	1024.3	1044.6	868.3
67.5°	983.6	949.7	854.7	759.7	732.6
70°	800.4	759.7	725.8	624.1	596.9
72.5°	637.6	596.9	549.5	495.2	474.8
75°	481.6	447.7	420.6	400.2	440.9
77.5°	332.4	318.8	298.5	278.1	271.3
80°	217.1	210.3	203.5	196.7	189.9
82.5°	128.9	128.9	128.9	128.9	128.9
85°	67.8	74.6	81.4	88.2	95.0
87.5°	40.7	40.7	47.5	54.3	61.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)