

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: P563221

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563221
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-50-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13293.0 lumens
Efficiency: N/A
Efficacy: 102.6 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

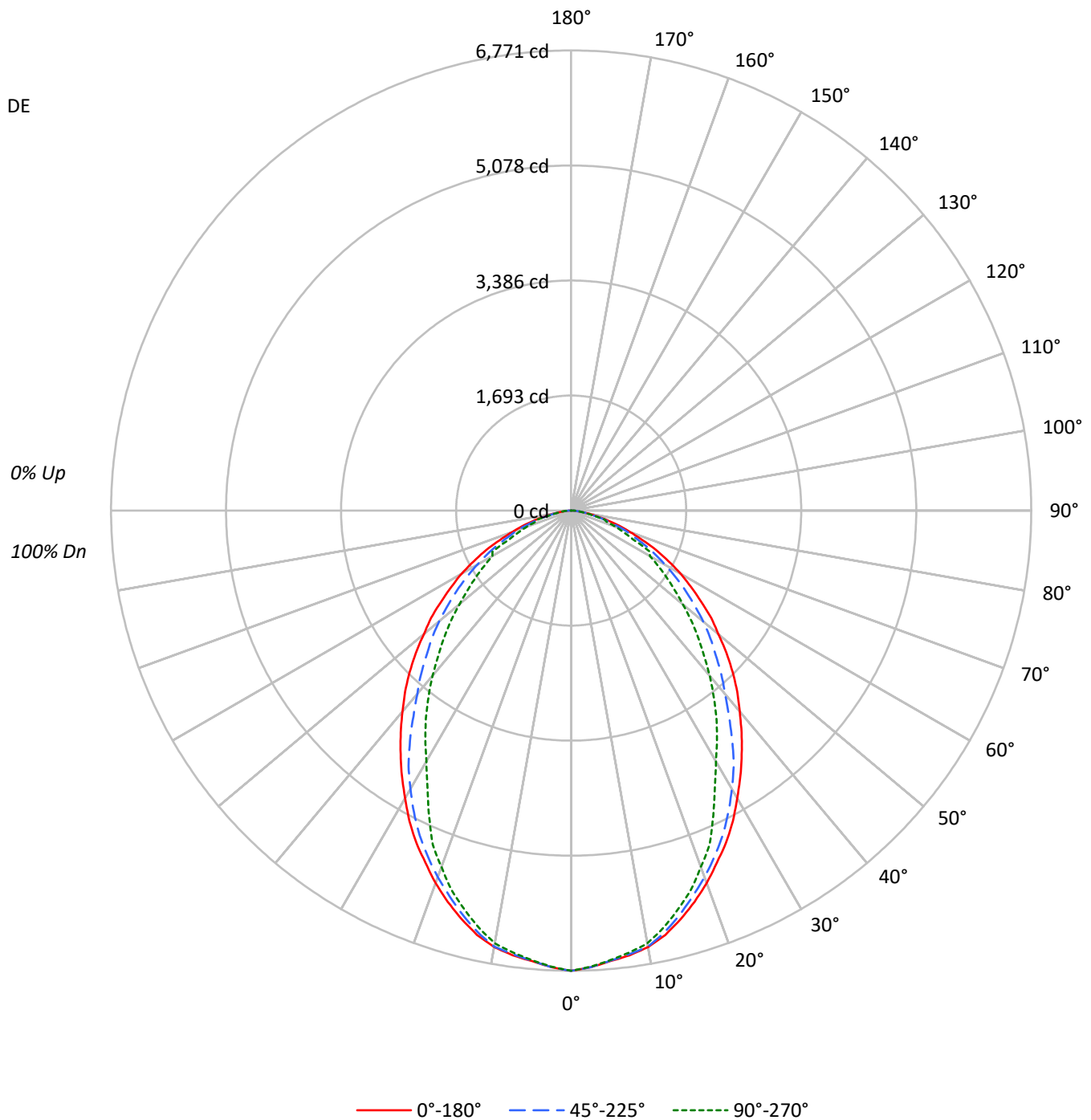
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9111	9111	9111
5°	8987	8976	8966
10°	8909	8898	8834
15°	8669	8582	8462
20°	8350	8216	7992
25°	8007	7833	7345
30°	7589	7346	6616
35°	7188	6789	6120
40°	6778	6187	5569
45°	6390	5720	5035
50°	5915	5309	4490
55°	5472	4811	4021
60°	5014	4297	3602
65°	4411	3763	3190
70°	3634	3295	2710
75°	2889	2523	2645
80°	1941	1819	1698
85°	1209	1450	1692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6390 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	630.3	4.7
10°-20°	1729.8	13.0
20°-30°	2394.9	18.0
30°-40°	2553.6	19.2
40°-50°	2329.6	17.5
50°-60°	1825.1	13.7
60°-70°	1189.5	8.9
70°-80°	527.0	4.0
80°-90°	113.1	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°	4755.0	35.8
0°-40°	7308.6	55.0
0°-60°	11463.4	86.2
0°-90°	13293.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13293.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6771	6771	6771	6771	6771	
5°	6654	6646	6646	6638	6638	632
15°	6223	6223	6161	6098	6075	1750
25°	5394	5362	5276	5088	4947	2476
35°	4376	4345	4133	3820	3726	2736
45°	3358	3288	3006	2756	2646	2587
55°	2333	2262	2051	1808	1714	2092
65°	1386	1307	1182	1206	1002	1366
75°	556	517	485	462	509	596
85°	78	86	94	102	110	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6771.3	6771.3	6771.3	6771.3	6771.3
2.5°	6724.3	6724.3	6724.3	6716.5	6716.5
5°	6653.9	6646.0	6646.0	6638.2	6638.2
7.5°	6599.1	6591.2	6583.4	6575.6	6559.9
10°	6520.8	6520.8	6513.0	6473.8	6466.0
12.5°	6395.5	6387.7	6356.4	6301.6	6285.9
15°	6223.3	6223.3	6160.7	6098.1	6074.6
17.5°	6035.4	6027.6	5949.3	5886.7	5855.4
20°	5831.9	5816.3	5738.0	5636.2	5581.4
22.5°	5604.9	5604.9	5511.0	5377.9	5323.1
25°	5393.5	5362.2	5276.1	5088.2	4947.3
27.5°	5150.9	5103.9	5010.0	4743.8	4579.4
30°	4884.7	4861.2	4728.2	4383.7	4258.5
32.5°	4634.2	4595.1	4454.2	4094.1	3992.3
35°	4375.9	4344.6	4133.2	3820.1	3726.2
37.5°	4117.6	4078.4	3812.3	3561.8	3444.3
40°	3859.2	3812.3	3522.6	3295.6	3170.4
42.5°	3616.6	3553.9	3272.1	3029.5	2888.6
45°	3358.2	3287.8	3006.0	2755.5	2645.9
47.5°	3099.9	3037.3	2779.0	2520.6	2395.4
50°	2825.9	2771.1	2536.3	2278.0	2144.9
52.5°	2598.9	2512.8	2285.8	2027.5	1917.9
55°	2332.8	2262.3	2051.0	1808.3	1714.3
57.5°	2090.1	2019.6	1823.9	1596.9	1518.6
60°	1863.1	1761.3	1596.9	1401.2	1338.6
62.5°	1612.6	1534.3	1393.4	1229.0	1307.3
65°	1385.6	1307.3	1182.0	1205.5	1002.0
67.5°	1135.1	1095.9	986.3	876.7	845.4
70°	923.7	876.7	837.6	720.2	688.9
72.5°	735.8	688.9	634.1	571.4	548.0
75°	555.8	516.7	485.3	461.9	508.8
77.5°	383.6	367.9	344.4	321.0	313.1
80°	250.5	242.7	234.8	227.0	219.2
82.5°	148.7	148.7	148.7	148.7	148.7
85°	78.3	86.1	93.9	101.8	109.6
87.5°	47.0	47.0	54.8	62.6	70.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)