

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: P563222

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563222
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-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11190.0 lumens
Efficiency: N/A
Efficacy: 86.3 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

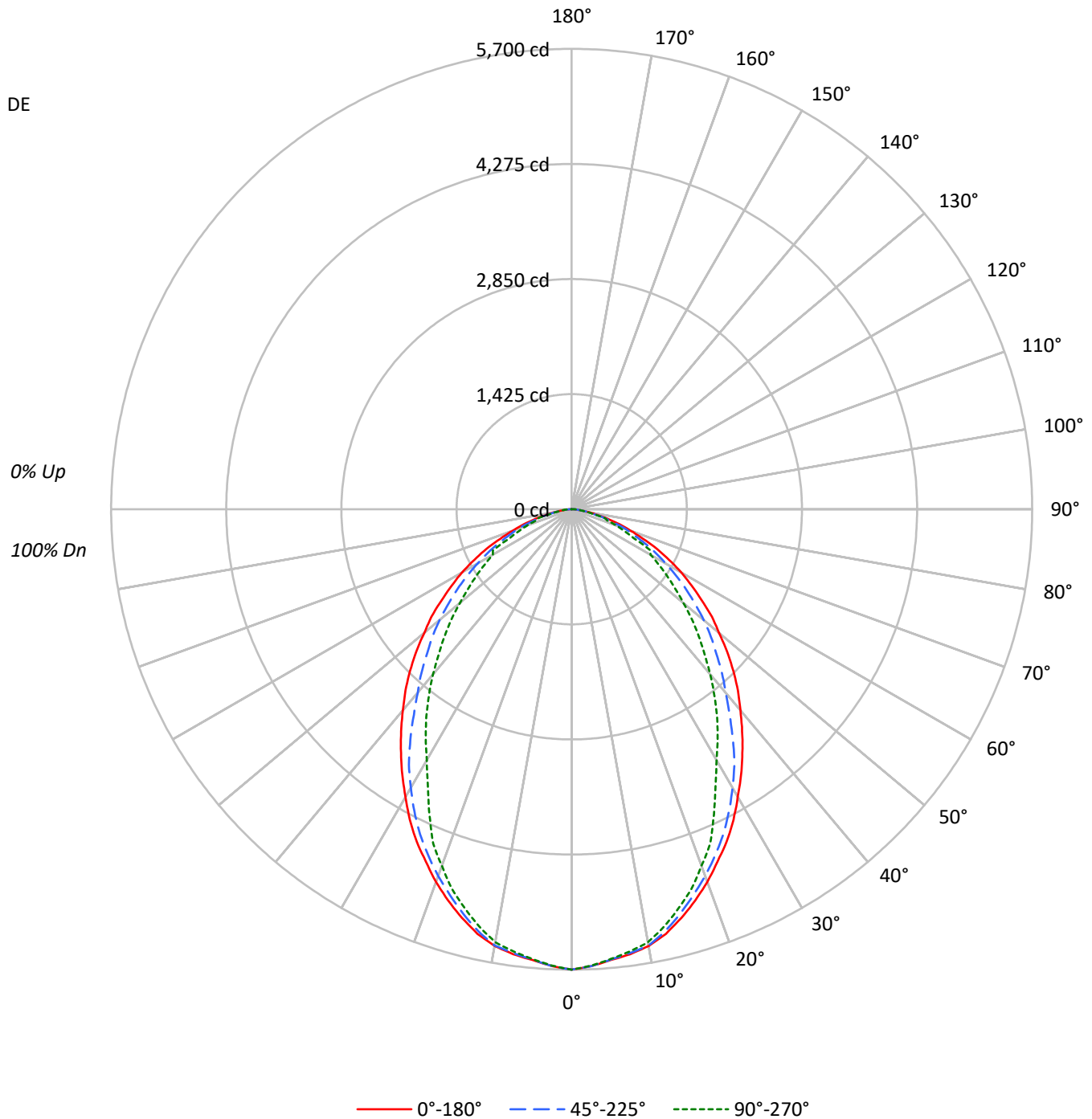
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7669	7669	7669
5°	7565	7556	7547
10°	7500	7491	7436
15°	7297	7224	7123
20°	7029	6916	6727
25°	6740	6594	6183
30°	6388	6184	5569
35°	6050	5715	5152
40°	5706	5208	4688
45°	5379	4815	4238
50°	4980	4469	3779
55°	4606	4050	3385
60°	4220	3617	3032
65°	3713	3168	2685
70°	3059	2774	2281
75°	2432	2124	2227
80°	1634	1532	1430
85°	1017	1221	1425

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5379 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	530.6	4.7
10°-20°	1456.2	13.0
20°-30°	2016.0	18.0
30°-40°	2149.6	19.2
40°-50°	1961.1	17.5
50°-60°	1536.4	13.7
60°-70°	1001.3	8.9
70°-80°	443.6	4.0
80°-90°	95.2	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°	4002.8	35.8
0°-40°	6152.4	55.0
0°-60°	9649.8	86.2
0°-90°	11190.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11190.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5700	5700	5700	5700	5700	
5°	5601	5595	5595	5588	5588	532
15°	5239	5239	5186	5133	5114	1473
25°	4540	4514	4441	4283	4165	2084
35°	3684	3657	3479	3216	3137	2303
45°	2827	2768	2530	2320	2227	2178
55°	1964	1904	1726	1522	1443	1761
65°	1166	1100	995	1015	844	1149
75°	468	435	409	389	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°	5700.0	5700.0	5700.0	5700.0	5700.0
2.5°	5660.5	5660.5	5660.5	5653.9	5653.9
5°	5601.2	5594.6	5594.6	5588.0	5588.0
7.5°	5555.1	5548.5	5541.9	5535.3	5522.1
10°	5489.2	5489.2	5482.6	5449.6	5443.0
12.5°	5383.7	5377.1	5350.8	5304.7	5291.5
15°	5238.8	5238.8	5186.0	5133.3	5113.6
17.5°	5080.6	5074.0	5008.1	4955.4	4929.0
20°	4909.3	4896.1	4830.2	4744.5	4698.4
22.5°	4718.2	4718.2	4639.1	4527.1	4481.0
25°	4540.3	4513.9	4441.4	4283.3	4164.7
27.5°	4336.0	4296.4	4217.4	3993.3	3854.9
30°	4111.9	4092.2	3980.1	3690.2	3584.8
32.5°	3901.1	3868.1	3749.5	3446.4	3360.7
35°	3683.6	3657.2	3479.3	3215.7	3136.7
37.5°	3466.1	3433.2	3209.2	2998.3	2899.4
40°	3248.7	3209.2	2965.3	2774.2	2668.8
42.5°	3044.4	2991.7	2754.5	2550.2	2431.6
45°	2827.0	2767.6	2530.4	2319.6	2227.3
47.5°	2609.5	2556.8	2339.3	2121.9	2016.4
50°	2378.9	2332.7	2135.0	1917.6	1805.6
52.5°	2187.8	2115.3	1924.2	1706.7	1614.5
55°	1963.7	1904.4	1726.5	1522.2	1443.1
57.5°	1759.4	1700.1	1535.4	1344.3	1278.4
60°	1568.3	1482.7	1344.3	1179.5	1126.8
62.5°	1357.5	1291.6	1173.0	1034.6	1100.5
65°	1166.4	1100.5	995.0	1014.8	843.5
67.5°	955.5	922.5	830.3	738.0	711.7
70°	777.6	738.0	705.1	606.2	579.9
72.5°	619.4	579.9	533.8	481.0	461.3
75°	467.9	434.9	408.6	388.8	428.3
77.5°	322.9	309.7	289.9	270.2	263.6
80°	210.9	204.3	197.7	191.1	184.5
82.5°	125.2	125.2	125.2	125.2	125.2
85°	65.9	72.5	79.1	85.7	92.3
87.5°	39.5	39.5	46.1	52.7	59.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)