

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: P563701

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563701
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-LD4-4HI-40-UNV-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18740.0 lumens
Efficiency: N/A
Efficacy: 108.4 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

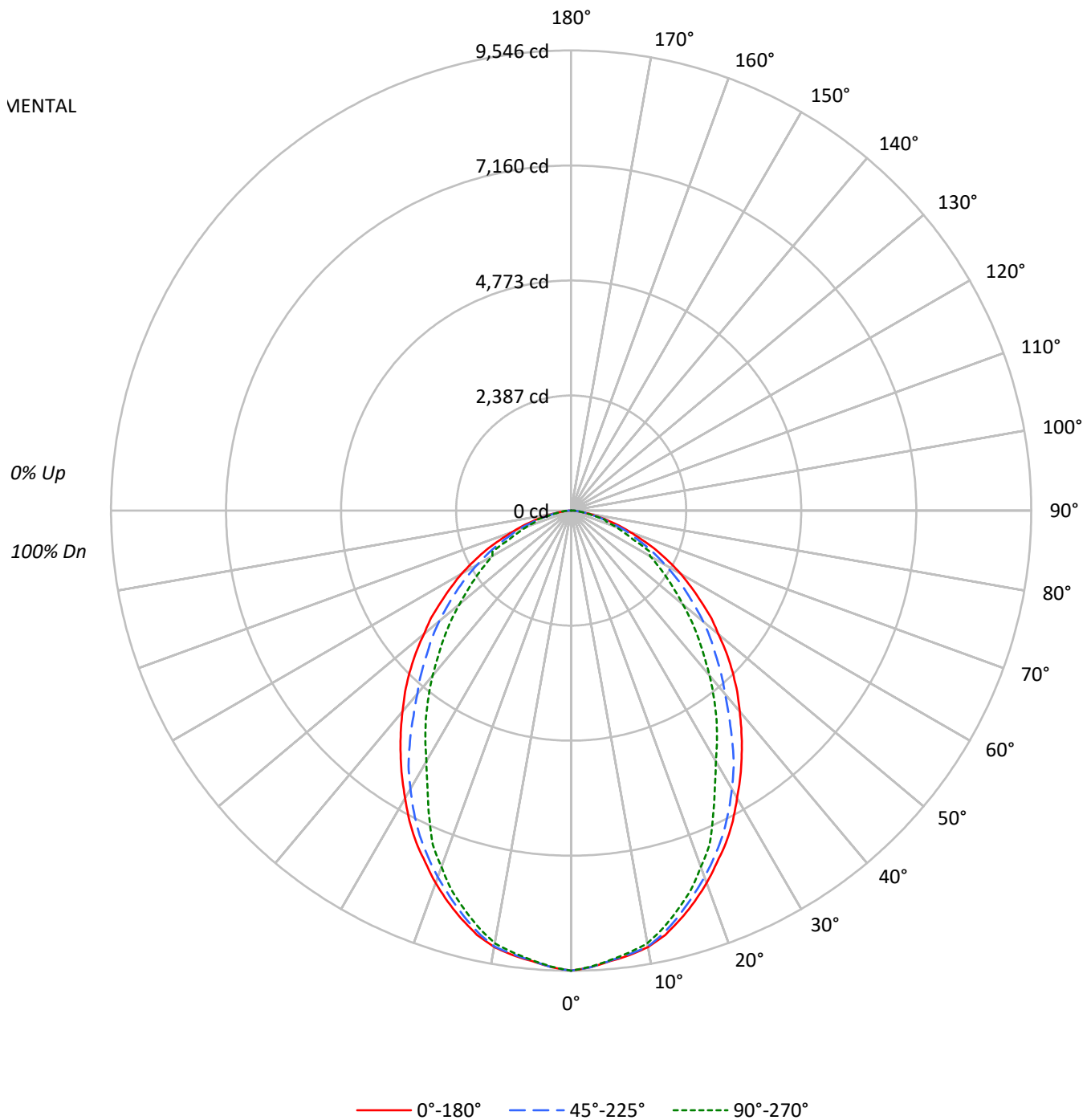
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	12844	12844	12844
5°	12669	12654	12640
10°	12560	12544	12454
15°	12221	12098	11929
20°	11772	11582	11266
25°	11288	11042	10354
30°	10699	10356	9327
35°	10133	9571	8628
40°	9556	8723	7850
45°	9008	8064	7098
50°	8339	7484	6329
55°	7714	6783	5669
60°	7068	6058	5078
65°	6219	5305	4497
70°	5123	4645	3820
75°	4073	3557	3729
80°	2736	2565	2394
85°	1704	2044	2385

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9008 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	888.6	4.7
10°-20°	2438.7	13.0
20°-30°	3376.2	18.0
30°-40°	3600.0	19.2
40°-50°	3284.2	17.5
50°-60°	2572.9	13.7
60°-70°	1676.9	8.9
70°-80°	742.9	4.0
80°-90°	159.5	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°	6703.5	35.8
0°-40°	10303.4	55.0
0°-60°	16160.6	86.2
0°-90°	18740.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18740.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9546	9546	9546	9546	9546	
5°	9380	9369	9369	9358	9358	890
15°	8773	8773	8685	8597	8564	2466
25°	7604	7560	7438	7173	6975	3491
35°	6169	6125	5827	5385	5253	3857
45°	4734	4635	4238	3885	3730	3647
55°	3289	3189	2891	2549	2417	2950
65°	1953	1843	1666	1700	1413	1925
75°	784	728	684	651	717	840
85°	110	121	132	144	154	153
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9545.9	9545.9	9545.9	9545.9	9545.9
2.5°	9479.7	9479.7	9479.7	9468.7	9468.7
5°	9380.4	9369.3	9369.3	9358.3	9358.3
7.5°	9303.1	9292.1	9281.0	9270.0	9247.9
10°	9192.8	9192.8	9181.7	9126.5	9115.5
12.5°	9016.2	9005.2	8961.0	8883.8	8861.7
15°	8773.4	8773.4	8685.1	8596.8	8563.7
17.5°	8508.5	8497.5	8387.2	8298.9	8254.7
20°	8221.6	8199.5	8089.2	7945.7	7868.5
22.5°	7901.6	7901.6	7769.2	7581.5	7504.3
25°	7603.6	7559.5	7438.1	7173.2	6974.6
27.5°	7261.5	7195.3	7062.9	6687.7	6455.9
30°	6886.3	6853.2	6665.6	6180.0	6003.4
32.5°	6533.2	6478.0	6279.3	5771.7	5628.2
35°	6169.0	6124.8	5826.9	5385.4	5253.0
37.5°	5804.8	5749.6	5374.4	5021.3	4855.7
40°	5440.6	5374.4	4966.1	4646.0	4469.5
42.5°	5098.5	5010.2	4612.9	4270.8	4072.2
45°	4734.3	4635.0	4237.7	3884.6	3730.1
47.5°	4370.1	4281.9	3917.7	3553.5	3376.9
50°	3983.9	3906.6	3575.6	3211.4	3023.8
52.5°	3663.9	3542.5	3222.4	2858.3	2703.8
55°	3288.6	3189.3	2891.4	2549.3	2416.8
57.5°	2946.5	2847.2	2571.3	2251.3	2140.9
60°	2626.5	2483.0	2251.3	1975.4	1887.1
62.5°	2273.4	2163.0	1964.4	1732.6	1843.0
65°	1953.3	1843.0	1666.4	1699.5	1412.6
67.5°	1600.2	1545.0	1390.5	1236.0	1191.9
70°	1302.2	1236.0	1180.8	1015.3	971.1
72.5°	1037.4	971.1	893.9	805.6	772.5
75°	783.5	728.4	684.2	651.1	717.3
77.5°	540.8	518.7	485.6	452.5	441.4
80°	353.1	342.1	331.1	320.0	309.0
82.5°	209.7	209.7	209.7	209.7	209.7
85°	110.4	121.4	132.4	143.5	154.5
87.5°	66.2	66.2	77.3	88.3	99.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)