

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: P563124

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563124
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-40-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11809.0 lumens
Efficiency: N/A
Efficacy: 91.1 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

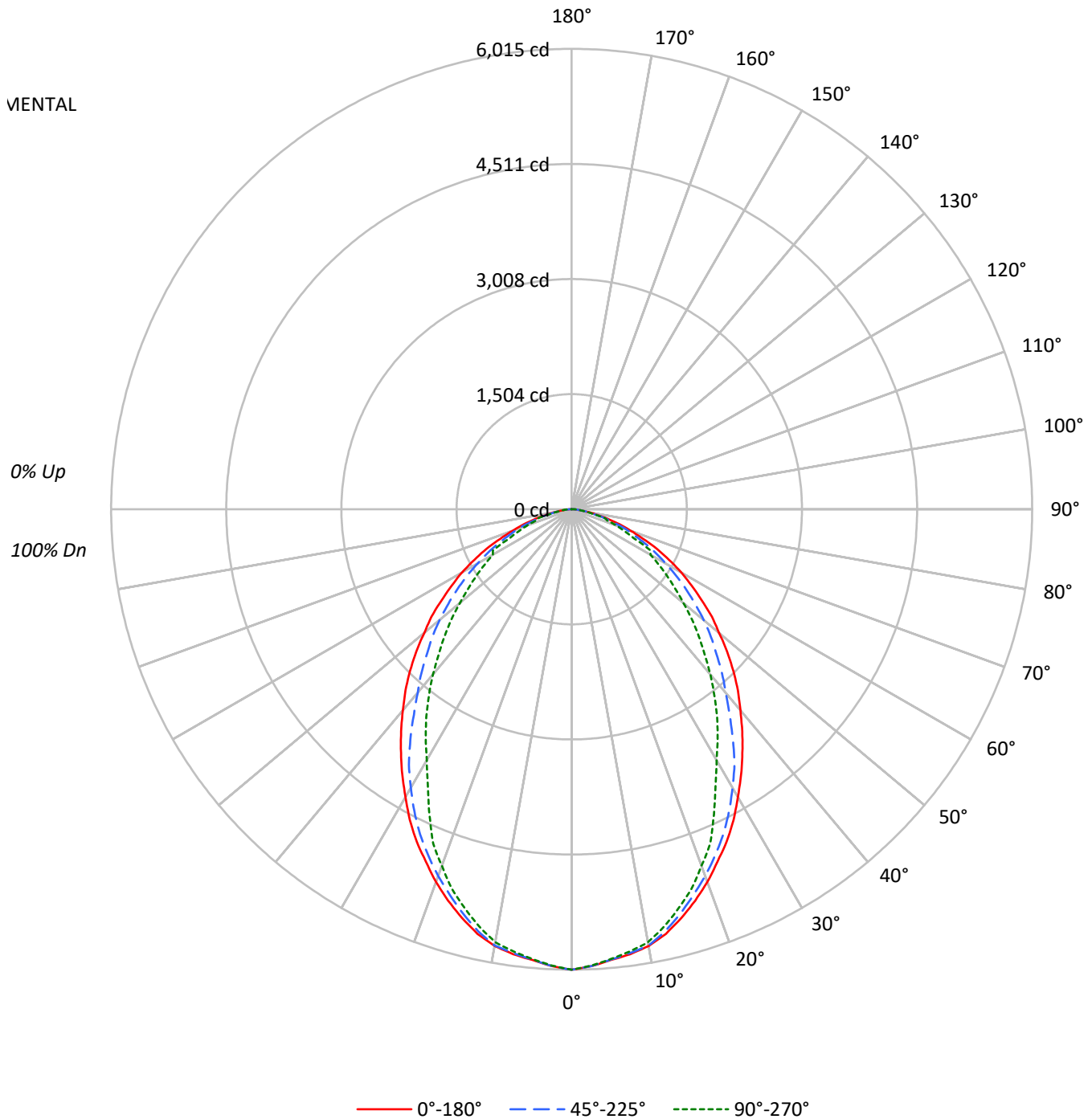
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8094	8094	8094
5°	7984	7974	7965
10°	7914	7905	7848
15°	7701	7623	7517
20°	7418	7299	7099
25°	7113	6958	6525
30°	6742	6526	5878
35°	6385	6031	5437
40°	6022	5497	4947
45°	5677	5081	4473
50°	5255	4716	3988
55°	4861	4274	3573
60°	4454	3817	3200
65°	3919	3343	2834
70°	3228	2927	2408
75°	2567	2242	2350
80°	1724	1616	1509
85°	1073	1288	1504

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5677 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	559.9	4.7
10°-20°	1536.7	13.0
20°-30°	2127.5	18.0
30°-40°	2268.5	19.2
40°-50°	2069.6	17.5
50°-60°	1621.3	13.7
60°-70°	1056.7	8.9
70°-80°	468.2	4.0
80°-90°	100.5	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°	4224.2	35.8
0°-40°	6492.7	55.0
0°-60°	10183.6	86.2
0°-90°	11809.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11809.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6015	6015	6015	6015	6015	
5°	5911	5904	5904	5897	5897	561
15°	5529	5529	5473	5417	5396	1554
25°	4791	4764	4687	4520	4395	2200
35°	3887	3860	3672	3394	3310	2430
45°	2983	2921	2670	2448	2350	2298
55°	2072	2010	1822	1606	1523	1859
65°	1231	1161	1050	1071	890	1213
75°	494	459	431	410	452	529
85°	70	76	83	90	97	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6015.3	6015.3	6015.3	6015.3	6015.3
2.5°	5973.6	5973.6	5973.6	5966.7	5966.7
5°	5911.0	5904.1	5904.1	5897.1	5897.1
7.5°	5862.4	5855.4	5848.4	5841.5	5827.6
10°	5792.8	5792.8	5785.9	5751.1	5744.1
12.5°	5681.5	5674.6	5646.8	5598.1	5584.2
15°	5528.6	5528.6	5472.9	5417.3	5396.4
17.5°	5361.7	5354.7	5285.2	5229.5	5201.7
20°	5180.8	5166.9	5097.4	5007.0	4958.3
22.5°	4979.2	4979.2	4895.7	4777.5	4728.8
25°	4791.4	4763.6	4687.1	4520.2	4395.0
27.5°	4575.8	4534.1	4450.7	4214.2	4068.2
30°	4339.4	4318.5	4200.3	3894.3	3783.1
32.5°	4116.9	4082.1	3956.9	3637.0	3546.6
35°	3887.4	3859.6	3671.8	3393.6	3310.2
37.5°	3657.9	3623.1	3386.7	3164.1	3059.8
40°	3428.4	3386.7	3129.4	2927.7	2816.4
42.5°	3212.8	3157.2	2906.8	2691.3	2566.1
45°	2983.3	2920.7	2670.4	2447.9	2350.5
47.5°	2753.8	2698.2	2468.7	2239.2	2128.0
50°	2510.5	2461.8	2253.1	2023.7	1905.4
52.5°	2308.8	2232.3	2030.6	1801.1	1703.8
55°	2072.3	2009.8	1822.0	1606.4	1523.0
57.5°	1856.8	1794.2	1620.3	1418.6	1349.1
60°	1655.1	1564.7	1418.6	1244.8	1189.2
62.5°	1432.6	1363.0	1237.8	1091.8	1161.3
65°	1230.9	1161.3	1050.1	1070.9	890.1
67.5°	1008.4	973.6	876.2	778.9	751.0
70°	820.6	778.9	744.1	639.8	612.0
72.5°	653.7	612.0	563.3	507.7	486.8
75°	493.7	459.0	431.2	410.3	452.0
77.5°	340.8	326.8	306.0	285.1	278.2
80°	222.5	215.6	208.6	201.7	194.7
82.5°	132.1	132.1	132.1	132.1	132.1
85°	69.5	76.5	83.4	90.4	97.4
87.5°	41.7	41.7	48.7	55.6	62.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)