

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: P563228

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563228
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-82-96-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11829.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

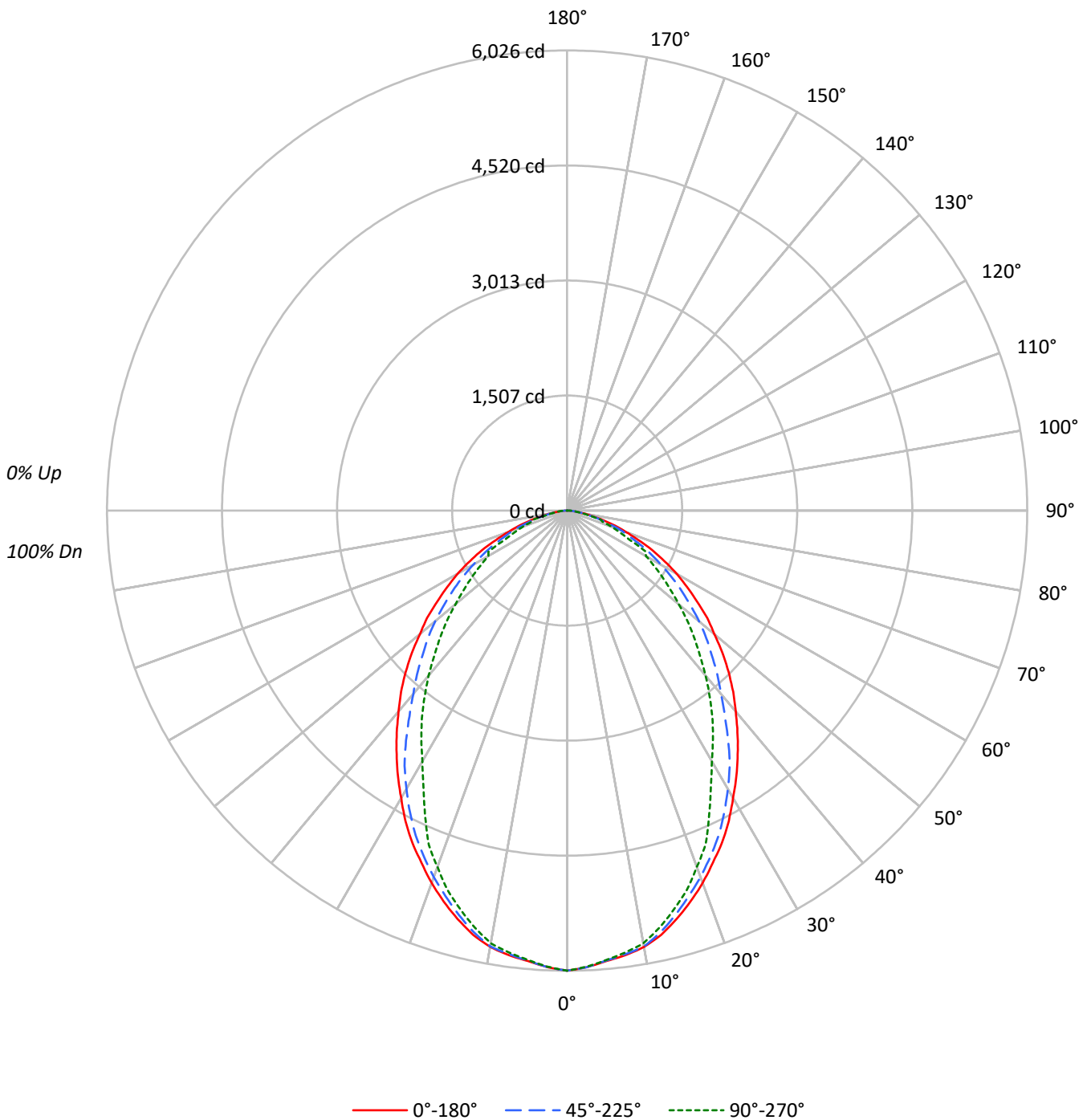
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RW	70	50	30	10	70	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°	8107	8107	8107
5°	7997	7988	7978
10°	7928	7918	7861
15°	7714	7636	7530
20°	7431	7311	7112
25°	7125	6970	6536
30°	6753	6537	5888
35°	6396	6041	5446
40°	6032	5506	4955
45°	5686	5090	4480
50°	5264	4724	3995
55°	4869	4281	3579
60°	4461	3824	3205
65°	3926	3349	2839
70°	3234	2932	2412
75°	2571	2245	2354
80°	1727	1619	1511
85°	1076	1291	1505

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5686 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	560.9	4.7
10°-20°	1539.3	13.0
20°-30°	2131.1	18.0
30°-40°	2272.4	19.2
40°-50°	2073.1	17.5
50°-60°	1624.1	13.7
60°-70°	1058.5	8.9
70°-80°	469.0	4.0
80°-90°	100.7	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°	4231.3	35.8
0°-40°	6503.7	55.0
0°-60°	10200.9	86.2
0°-90°	11829.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11829.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6026	6026	6026	6026	6026	
5°	5921	5914	5914	5907	5907	562
15°	5538	5538	5482	5426	5406	1557
25°	4800	4772	4695	4528	4402	2203
35°	3894	3866	3678	3399	3316	2434
45°	2988	2926	2675	2452	2354	2302
55°	2076	2013	1825	1609	1526	1862
65°	1233	1163	1052	1073	892	1215
75°	495	460	432	411	453	530
85°	70	77	84	91	98	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6025.5	6025.5	6025.5	6025.5	6025.5
2.5°	5983.7	5983.7	5983.7	5976.8	5976.8
5°	5921.0	5914.1	5914.1	5907.1	5907.1
7.5°	5872.3	5865.3	5858.4	5851.4	5837.5
10°	5802.6	5802.6	5795.7	5760.8	5753.9
12.5°	5691.2	5684.2	5656.3	5607.6	5593.6
15°	5537.9	5537.9	5482.2	5426.5	5405.6
17.5°	5370.7	5363.8	5294.1	5238.4	5210.5
20°	5189.6	5175.7	5106.0	5015.5	4966.7
22.5°	4987.6	4987.6	4904.0	4785.6	4736.8
25°	4799.5	4771.7	4695.0	4527.9	4402.5
27.5°	4583.6	4541.8	4458.2	4221.4	4075.1
30°	4346.7	4325.8	4207.4	3900.9	3789.5
32.5°	4123.8	4089.0	3963.6	3643.2	3552.6
35°	3894.0	3866.1	3678.0	3399.4	3315.8
37.5°	3664.1	3629.3	3392.4	3169.5	3065.0
40°	3434.2	3392.4	3134.7	2932.7	2821.2
42.5°	3218.3	3162.5	2911.8	2695.8	2570.4
45°	2988.4	2925.7	2674.9	2452.0	2354.5
47.5°	2758.5	2702.8	2472.9	2243.0	2131.6
50°	2514.7	2465.9	2257.0	2027.1	1908.7
52.5°	2312.7	2236.1	2034.1	1804.2	1706.7
55°	2075.8	2013.2	1825.1	1609.1	1525.5
57.5°	1859.9	1797.2	1623.1	1421.1	1351.4
60°	1657.9	1567.3	1421.1	1246.9	1191.2
62.5°	1435.0	1365.3	1239.9	1093.7	1163.3
65°	1233.0	1163.3	1051.9	1072.8	891.6
67.5°	1010.1	975.2	877.7	780.2	752.3
70°	822.0	780.2	745.4	640.9	613.0
72.5°	654.8	613.0	564.2	508.5	487.6
75°	494.6	459.8	431.9	411.0	452.8
77.5°	341.3	327.4	306.5	285.6	278.6
80°	222.9	215.9	209.0	202.0	195.0
82.5°	132.4	132.4	132.4	132.4	132.4
85°	69.7	76.6	83.6	90.6	97.5
87.5°	41.8	41.8	48.8	55.7	62.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)