

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: P563224

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563224
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-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10076.0 lumens
Efficiency: N/A
Efficacy: 77.7 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

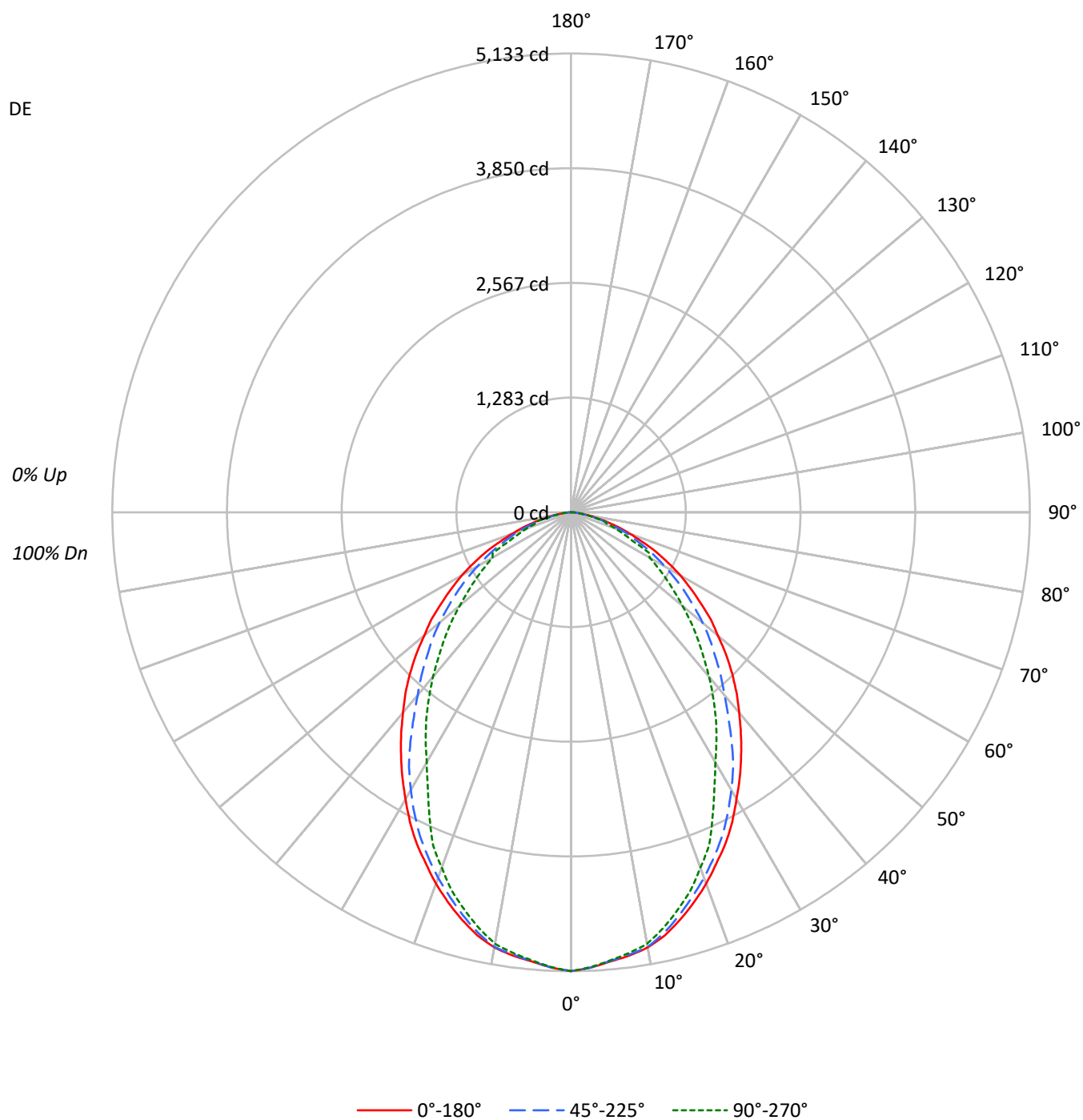
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	6906	6906	6906
5°	6812	6804	6796
10°	6753	6745	6696
15°	6571	6505	6414
20°	6329	6228	6058
25°	6069	5937	5567
30°	5752	5568	5015
35°	5448	5146	4639
40°	5138	4690	4221
45°	4844	4336	3816
50°	4484	4024	3403
55°	4148	3647	3048
60°	3800	3257	2730
65°	3344	2853	2418
70°	2755	2498	2054
75°	2190	1913	2005
80°	1471	1379	1287
85°	915	1099	1283

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4844 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	477.8	4.7
10°-20°	1311.2	13.0
20°-30°	1815.3	18.0
30°-40°	1935.6	19.2
40°-50°	1765.8	17.5
50°-60°	1383.4	13.7
60°-70°	901.6	8.9
70°-80°	399.5	4.0
80°-90°	85.8	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°	3604.3	35.8
0°-40°	5539.9	55.0
0°-60°	8689.1	86.2
0°-90°	10076.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10076.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5133	5133	5133	5133	5133	
5°	5044	5038	5038	5032	5032	479
15°	4717	4717	4670	4622	4604	1326
25°	4088	4064	3999	3857	3750	1877
35°	3317	3293	3133	2896	2824	2074
45°	2546	2492	2278	2089	2006	1961
55°	1768	1715	1555	1371	1300	1586
65°	1050	991	896	914	760	1035
75°	421	392	368	350	386	452
85°	59	65	71	77	83	82
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5132.6	5132.6	5132.6	5132.6	5132.6
2.5°	5097.0	5097.0	5097.0	5091.0	5091.0
5°	5043.6	5037.6	5037.6	5031.7	5031.7
7.5°	5002.0	4996.1	4990.2	4984.2	4972.4
10°	4942.7	4942.7	4936.8	4907.1	4901.2
12.5°	4847.8	4841.8	4818.1	4776.6	4764.7
15°	4717.2	4717.2	4669.8	4622.3	4604.5
17.5°	4574.8	4568.9	4509.5	4462.1	4438.3
20°	4420.5	4408.7	4349.3	4272.2	4230.7
22.5°	4248.5	4248.5	4177.3	4076.4	4034.9
25°	4088.3	4064.5	3999.3	3856.9	3750.0
27.5°	3904.3	3868.7	3797.5	3595.8	3471.2
30°	3702.6	3684.8	3583.9	3322.8	3227.9
32.5°	3512.7	3483.0	3376.2	3103.3	3026.1
35°	3316.9	3293.2	3133.0	2895.6	2824.4
37.5°	3121.1	3091.4	2889.7	2699.8	2610.8
40°	2925.3	2889.7	2670.1	2498.1	2403.1
42.5°	2741.3	2693.9	2480.3	2296.3	2189.5
45°	2545.5	2492.1	2278.5	2088.6	2005.6
47.5°	2349.7	2302.2	2106.4	1910.6	1815.7
50°	2142.0	2100.5	1922.5	1726.7	1625.8
52.5°	1970.0	1904.7	1732.6	1536.8	1453.7
55°	1768.2	1714.8	1554.6	1370.7	1299.5
57.5°	1584.3	1530.9	1382.5	1210.5	1151.1
60°	1412.2	1335.1	1210.5	1062.1	1014.6
62.5°	1222.3	1163.0	1056.2	931.6	990.9
65°	1050.3	990.9	896.0	913.8	759.5
67.5°	860.4	830.7	747.6	664.6	640.8
70°	700.2	664.6	634.9	545.9	522.2
72.5°	557.8	522.2	480.6	433.2	415.4
75°	421.3	391.6	367.9	350.1	385.7
77.5°	290.7	278.9	261.1	243.3	237.3
80°	189.9	183.9	178.0	172.1	166.1
82.5°	112.7	112.7	112.7	112.7	112.7
85°	59.3	65.3	71.2	77.1	83.1
87.5°	35.6	35.6	41.5	47.5	53.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)