

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: P563797

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563797
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-50-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17724.0 lumens
Efficiency: N/A
Efficacy: 102.6 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

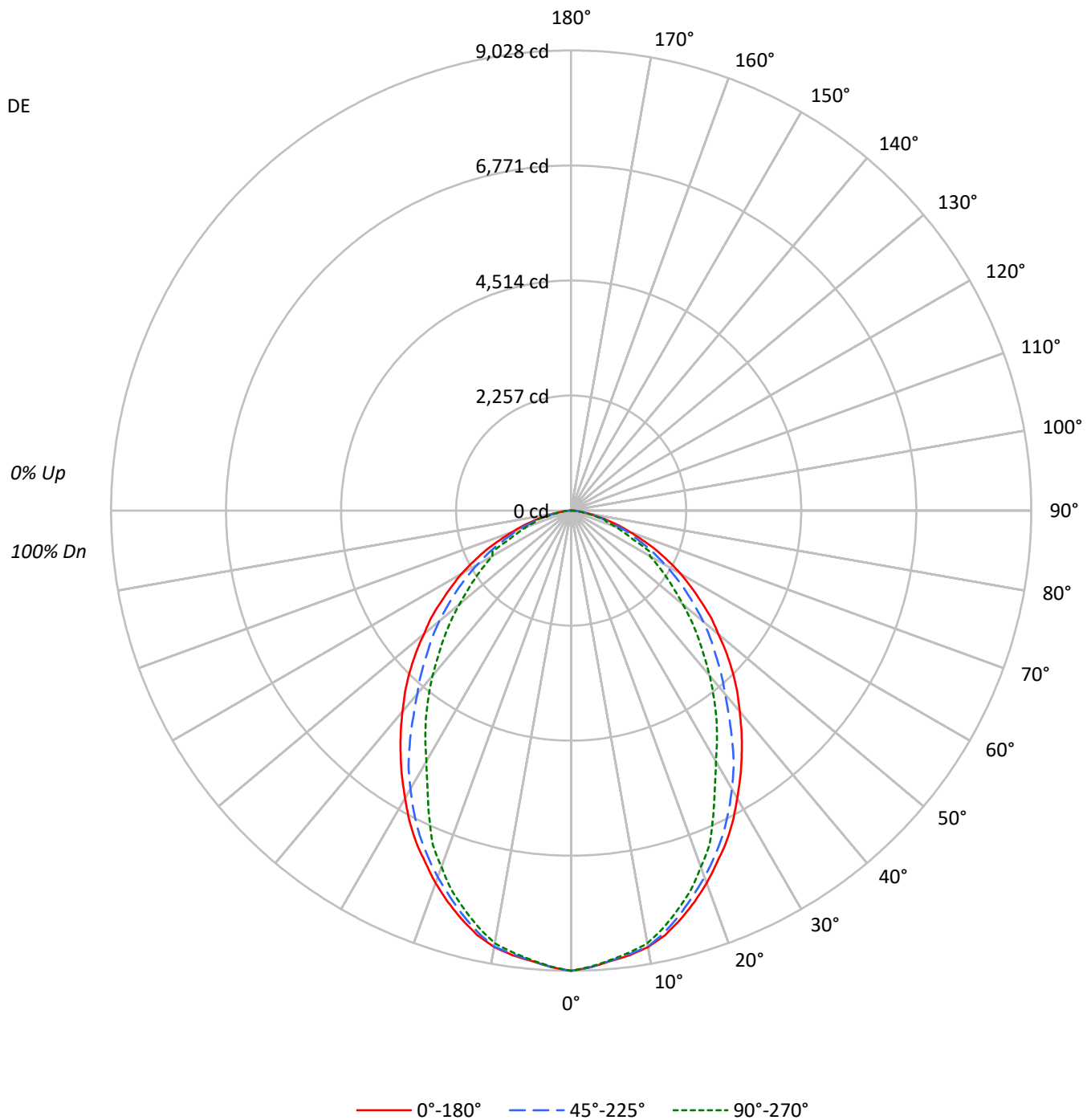
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	12148	12148	12148
5°	11983	11968	11954
10°	11879	11864	11779
15°	11558	11442	11282
20°	11134	10954	10656
25°	10676	10444	9793
30°	10119	9794	8822
35°	9583	9052	8160
40°	9038	8250	7425
45°	8520	7626	6713
50°	7887	7079	5986
55°	7296	6415	5362
60°	6685	5730	4803
65°	5882	5018	4253
70°	4845	4393	3613
75°	3853	3364	3527
80°	2588	2426	2264
85°	1612	1933	2255

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8520 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	840.4	4.7
10°-20°	2306.5	13.0
20°-30°	3193.1	18.0
30°-40°	3404.8	19.2
40°-50°	3106.2	17.5
50°-60°	2433.4	13.7
60°-70°	1586.0	8.9
70°-80°	702.7	4.0
80°-90°	150.9	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°	6340.0	35.8
0°-40°	9744.8	55.0
0°-60°	15284.5	86.2
0°-90°	17724.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17724.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9028	9028	9028	9028	9028	
5°	8872	8861	8861	8851	8851	842
15°	8298	8298	8214	8131	8099	2333
25°	7191	7150	7035	6784	6596	3302
35°	5834	5793	5511	5094	4968	3648
45°	4478	4384	4008	3674	3528	3449
55°	3110	3016	2735	2411	2286	2790
65°	1847	1743	1576	1607	1336	1821
75°	741	689	647	616	678	794
85°	104	115	125	136	146	145
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9028.4	9028.4	9028.4	9028.4	9028.4
2.5°	8965.7	8965.7	8965.7	8955.3	8955.3
5°	8871.8	8861.4	8861.4	8850.9	8850.9
7.5°	8798.7	8788.3	8777.9	8767.4	8746.6
10°	8694.4	8694.4	8683.9	8631.7	8621.3
12.5°	8527.4	8516.9	8475.2	8402.1	8381.2
15°	8297.7	8297.7	8214.2	8130.8	8099.4
17.5°	8047.3	8036.8	7932.4	7848.9	7807.2
20°	7775.9	7755.0	7650.6	7514.9	7441.9
22.5°	7473.2	7473.2	7347.9	7170.5	7097.4
25°	7191.4	7149.6	7034.8	6784.3	6596.4
27.5°	6867.8	6805.2	6679.9	6325.1	6105.9
30°	6513.0	6481.6	6304.2	5845.0	5678.0
32.5°	6179.0	6126.8	5938.9	5458.8	5323.1
35°	5834.5	5792.8	5511.0	5093.5	4968.2
37.5°	5490.1	5437.9	5083.0	4749.0	4592.5
40°	5145.6	5083.0	4696.8	4394.2	4227.2
42.5°	4822.1	4738.6	4362.8	4039.3	3851.4
45°	4477.7	4383.7	4008.0	3674.0	3527.8
47.5°	4133.2	4049.7	3705.3	3360.8	3193.9
50°	3767.9	3694.8	3381.7	3037.3	2859.9
52.5°	3465.2	3350.4	3047.7	2703.3	2557.2
55°	3110.4	3016.4	2734.6	2411.0	2285.8
57.5°	2786.8	2692.9	2431.9	2129.2	2024.9
60°	2484.1	2348.4	2129.2	1868.3	1784.8
62.5°	2150.1	2045.7	1857.9	1638.7	1743.0
65°	1847.4	1743.0	1576.1	1607.4	1336.0
67.5°	1513.4	1461.2	1315.1	1169.0	1127.2
70°	1231.6	1169.0	1116.8	960.2	918.5
72.5°	981.1	918.5	845.4	761.9	730.6
75°	741.1	688.9	647.1	615.8	678.4
77.5°	511.4	490.6	459.2	427.9	417.5
80°	334.0	323.6	313.1	302.7	292.2
82.5°	198.3	198.3	198.3	198.3	198.3
85°	104.4	114.8	125.2	135.7	146.1
87.5°	62.6	62.6	73.1	83.5	93.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)