

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: P563719

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563719
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-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17225.0 lumens
Efficiency: N/A
Efficacy: 99.7 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

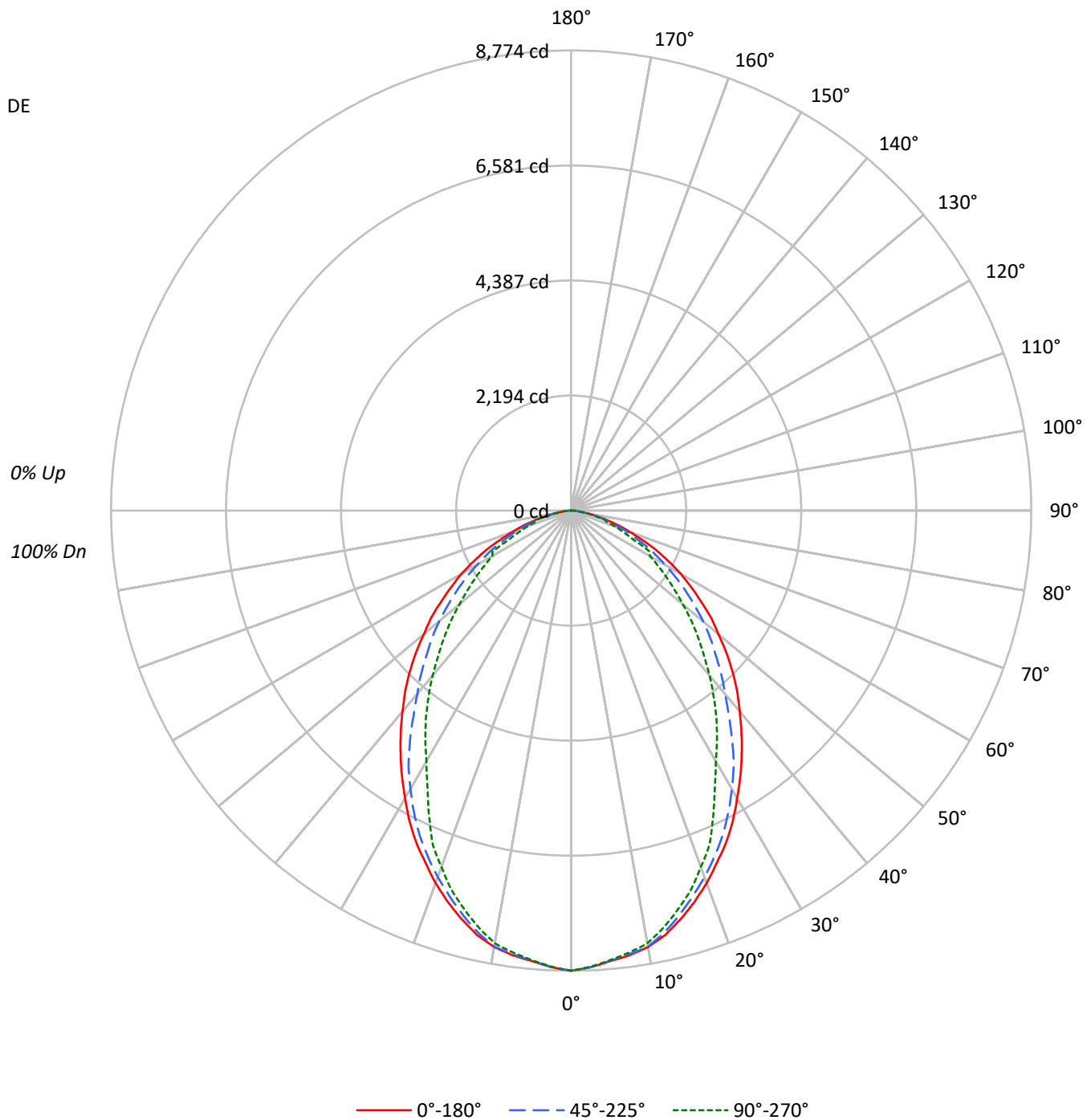
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	11806	11806	11806
5°	11645	11631	11618
10°	11544	11530	11447
15°	11233	11120	10964
20°	10820	10646	10356
25°	10376	10150	9517
30°	9834	9519	8573
35°	9314	8797	7931
40°	8783	8017	7216
45°	8280	7412	6524
50°	7665	6879	5818
55°	7091	6234	5211
60°	6497	5568	4668
65°	5716	4876	4134
70°	4709	4270	3511
75°	3744	3269	3427
80°	2515	2358	2201
85°	1565	1879	2192

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8280 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	816.8	4.7
10°-20°	2241.5	13.0
20°-30°	3103.2	18.0
30°-40°	3309.0	19.2
40°-50°	3018.7	17.5
50°-60°	2364.9	13.7
60°-70°	1541.4	8.9
70°-80°	682.9	4.0
80°-90°	146.6	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°	6161.5	35.8
0°-40°	9470.5	55.0
0°-60°	14854.2	86.2
0°-90°	17225.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17225.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8774	8774	8774	8774	8774	
5°	8622	8612	8612	8602	8602	818
15°	8064	8064	7983	7902	7871	2267
25°	6989	6948	6837	6593	6411	3209
35°	5670	5630	5356	4950	4828	3545
45°	4352	4260	3895	3570	3428	3352
55°	3023	2932	2658	2343	2221	2711
65°	1795	1694	1532	1562	1298	1769
75°	720	670	629	598	659	772
85°	101	112	122	132	142	141
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8774.2	8774.2	8774.2	8774.2	8774.2
2.5°	8713.3	8713.3	8713.3	8703.2	8703.2
5°	8622.0	8611.9	8611.9	8601.7	8601.7
7.5°	8551.0	8540.9	8530.7	8520.6	8500.3
10°	8449.6	8449.6	8439.4	8388.7	8378.6
12.5°	8287.3	8277.2	8236.6	8165.6	8145.3
15°	8064.1	8064.1	7983.0	7901.8	7871.4
17.5°	7820.7	7810.5	7709.1	7628.0	7587.4
20°	7557.0	7536.7	7435.2	7303.4	7232.4
22.5°	7262.8	7262.8	7141.1	6968.6	6897.6
25°	6988.9	6948.3	6836.8	6593.3	6410.7
27.5°	6674.5	6613.6	6491.9	6147.0	5934.0
30°	6329.6	6299.2	6126.7	5680.4	5518.1
32.5°	6005.0	5954.3	5771.7	5305.1	5173.2
35°	5670.3	5629.7	5355.8	4950.1	4828.3
37.5°	5335.5	5284.8	4939.9	4615.3	4463.2
40°	5000.8	4939.9	4564.6	4270.4	4108.1
42.5°	4686.3	4605.2	4240.0	3925.6	3743.0
45°	4351.6	4260.3	3895.1	3570.5	3428.5
47.5°	4016.9	3935.7	3601.0	3266.2	3103.9
50°	3661.8	3590.8	3286.5	2951.8	2779.3
52.5°	3367.7	3256.1	2961.9	2627.2	2485.2
55°	3022.8	2931.5	2657.6	2343.2	2221.4
57.5°	2708.3	2617.0	2363.5	2069.3	1967.9
60°	2414.2	2282.3	2069.3	1815.7	1734.5
62.5°	2089.6	1988.1	1805.6	1592.5	1694.0
65°	1795.4	1694.0	1531.7	1562.1	1298.4
67.5°	1470.8	1420.1	1278.1	1136.1	1095.5
70°	1196.9	1136.1	1085.4	933.2	892.6
72.5°	953.5	892.6	821.6	740.5	710.0
75°	720.2	669.5	628.9	598.5	659.3
77.5°	497.0	476.7	446.3	415.9	405.7
80°	324.6	314.5	304.3	294.2	284.0
82.5°	192.7	192.7	192.7	192.7	192.7
85°	101.4	111.6	121.7	131.9	142.0
87.5°	60.9	60.9	71.0	81.1	91.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)