

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: P562752

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562752
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-LD4-2LO-40-UNV-81-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4699.0 lumens
Efficiency: N/A
Efficacy: 100.4 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

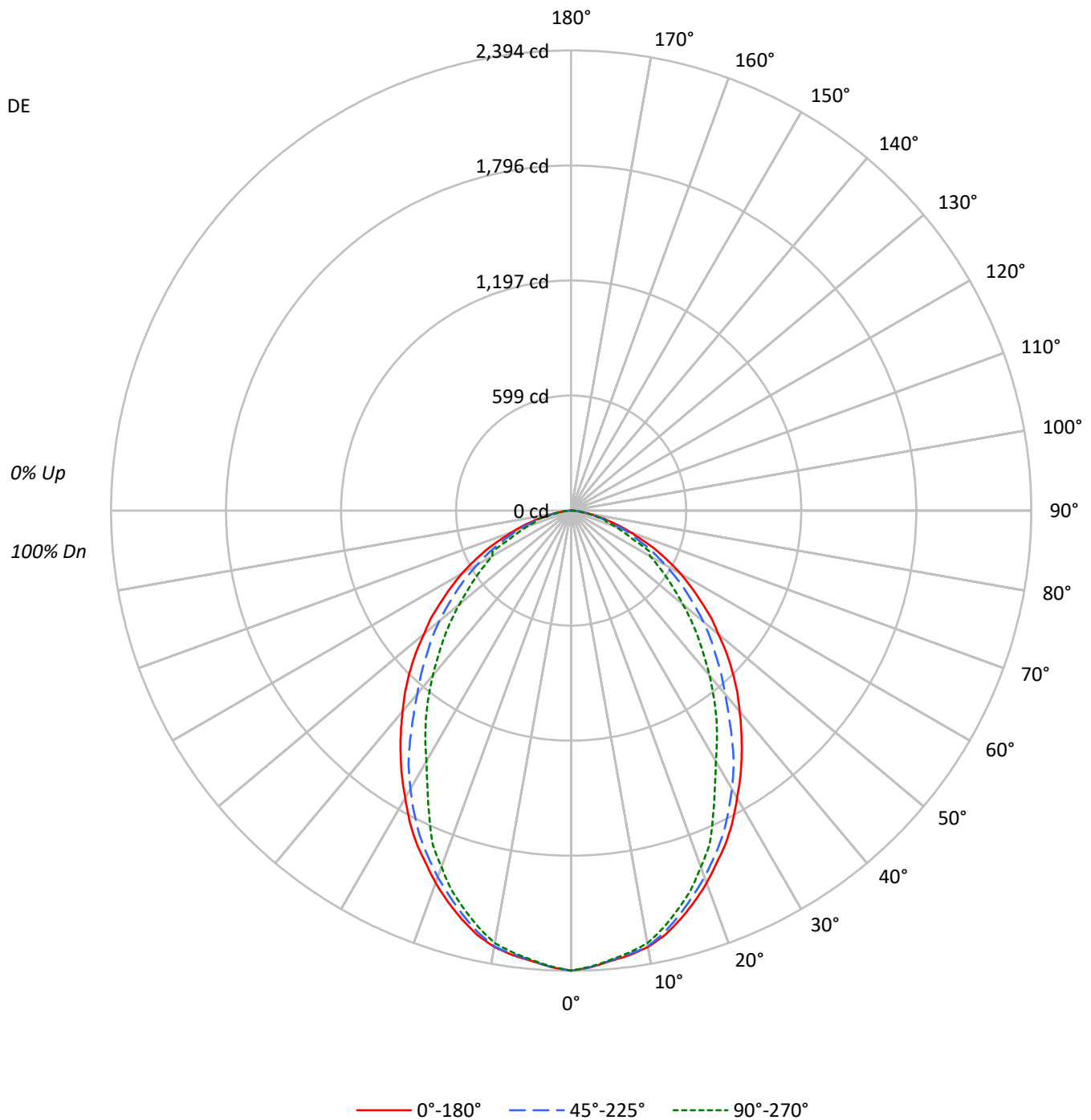
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3221	3221	3221
5°	3177	3173	3169
10°	3149	3146	3123
15°	3064	3034	2991
20°	2952	2904	2825
25°	2831	2769	2596
30°	2683	2597	2339
35°	2541	2400	2164
40°	2396	2187	1968
45°	2259	2022	1780
50°	2091	1877	1587
55°	1934	1701	1422
60°	1772	1519	1273
65°	1559	1330	1128
70°	1284	1165	958
75°	1022	892	935
80°	686	643	600
85°	428	513	597

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2259 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.8	4.7
10°-20°	611.5	13.0
20°-30°	846.6	18.0
30°-40°	902.7	19.2
40°-50°	823.5	17.5
50°-60°	645.2	13.7
60°-70°	420.5	8.9
70°-80°	186.3	4.0
80°-90°	40.0	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°	1680.9	35.8
0°-40°	2583.6	55.0
0°-60°	4052.2	86.2
0°-90°	4699.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4699.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2394	2394	2394	2394	2394	
5°	2352	2349	2349	2347	2347	223
15°	2200	2200	2178	2156	2147	618
25°	1907	1896	1865	1799	1749	875
35°	1547	1536	1461	1350	1317	967
45°	1187	1162	1063	974	935	914
55°	825	800	725	639	606	740
65°	490	462	418	426	354	483
75°	196	183	172	163	180	211
85°	28	30	33	36	39	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2393.6	2393.6	2393.6	2393.6	2393.6
2.5°	2377.0	2377.0	2377.0	2374.2	2374.2
5°	2352.1	2349.3	2349.3	2346.6	2346.6
7.5°	2332.7	2330.0	2327.2	2324.4	2318.9
10°	2305.1	2305.1	2302.3	2288.5	2285.7
12.5°	2260.8	2258.0	2246.9	2227.6	2222.0
15°	2199.9	2199.9	2177.8	2155.6	2147.3
17.5°	2133.5	2130.7	2103.1	2080.9	2069.8
20°	2061.5	2056.0	2028.3	1992.4	1973.0
22.5°	1981.3	1981.3	1948.1	1901.1	1881.7
25°	1906.6	1895.5	1865.1	1798.7	1748.9
27.5°	1820.8	1804.2	1771.0	1676.9	1618.8
30°	1726.7	1718.4	1671.4	1549.6	1505.3
32.5°	1638.2	1624.3	1574.5	1447.2	1411.3
35°	1546.9	1535.8	1461.1	1350.4	1317.2
37.5°	1455.5	1441.7	1347.6	1259.1	1217.6
40°	1364.2	1347.6	1245.2	1165.0	1120.7
42.5°	1278.4	1256.3	1156.7	1070.9	1021.1
45°	1187.1	1162.2	1062.6	974.0	935.3
47.5°	1095.8	1073.7	982.3	891.0	846.8
50°	999.0	979.6	896.6	805.2	758.2
52.5°	918.7	888.3	808.0	716.7	678.0
55°	824.6	799.7	725.0	639.2	606.0
57.5°	738.8	713.9	644.8	564.5	536.8
60°	658.6	622.6	564.5	495.3	473.2
62.5°	570.0	542.4	492.6	434.4	462.1
65°	489.8	462.1	417.8	426.1	354.2
67.5°	401.2	387.4	348.7	309.9	298.9
70°	326.5	309.9	296.1	254.6	243.5
72.5°	260.1	243.5	224.1	202.0	193.7
75°	196.5	182.6	171.6	163.3	179.9
77.5°	135.6	130.1	121.8	113.5	110.7
80°	88.5	85.8	83.0	80.2	77.5
82.5°	52.6	52.6	52.6	52.6	52.6
85°	27.7	30.4	33.2	36.0	38.7
87.5°	16.6	16.6	19.4	22.1	24.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)