

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: P562071

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562071
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-LD4-1HI-40-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 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: 4216.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

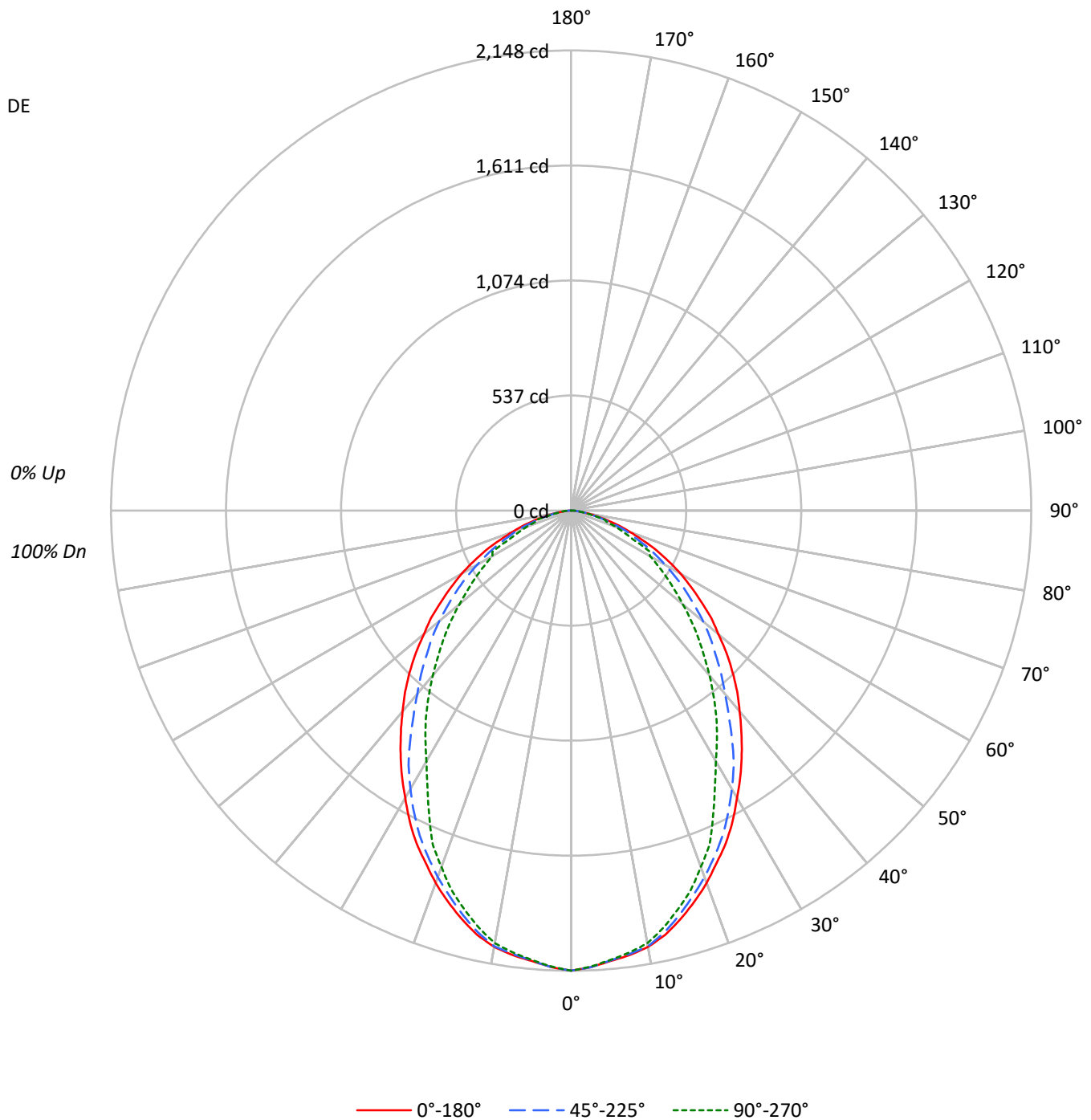
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2890	2890	2890
5°	2850	2847	2844
10°	2826	2822	2802
15°	2749	2722	2684
20°	2648	2606	2535
25°	2540	2484	2329
30°	2407	2330	2098
35°	2280	2153	1941
40°	2150	1962	1766
45°	2027	1814	1597
50°	1876	1684	1424
55°	1736	1526	1275
60°	1590	1363	1142
65°	1399	1194	1012
70°	1153	1045	860
75°	917	800	839
80°	615	577	539
85°	383	460	537

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2027 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.9	4.7
10°-20°	548.6	13.0
20°-30°	759.5	18.0
30°-40°	809.9	19.2
40°-50°	738.9	17.5
50°-60°	578.8	13.7
60°-70°	377.3	8.9
70°-80°	167.1	4.0
80°-90°	35.9	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°	1508.1	35.8
0°-40°	2318.0	55.0
0°-60°	3635.7	86.2
0°-90°	4216.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4216.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2148	2148	2148	2148	2148	
5°	2110	2108	2108	2105	2105	200
15°	1974	1974	1954	1934	1927	555
25°	1711	1701	1673	1614	1569	785
35°	1388	1378	1311	1212	1182	868
45°	1065	1043	953	874	839	820
55°	740	718	650	574	544	664
65°	439	415	375	382	318	433
75°	176	164	154	146	161	189
85°	25	27	30	32	35	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2147.6	2147.6	2147.6	2147.6	2147.6
2.5°	2132.7	2132.7	2132.7	2130.2	2130.2
5°	2110.3	2107.9	2107.9	2105.4	2105.4
7.5°	2093.0	2090.5	2088.0	2085.5	2080.5
10°	2068.1	2068.1	2065.6	2053.2	2050.7
12.5°	2028.4	2025.9	2016.0	1998.6	1993.6
15°	1973.8	1973.8	1953.9	1934.1	1926.6
17.5°	1914.2	1911.7	1886.9	1867.0	1857.1
20°	1849.6	1844.7	1819.9	1787.6	1770.2
22.5°	1777.6	1777.6	1747.9	1705.6	1688.3
25°	1710.6	1700.7	1673.4	1613.8	1569.1
27.5°	1633.6	1618.7	1589.0	1504.5	1452.4
30°	1549.2	1541.8	1499.6	1390.3	1350.6
32.5°	1469.8	1457.4	1412.7	1298.5	1266.2
35°	1387.9	1377.9	1310.9	1211.6	1181.8
37.5°	1305.9	1293.5	1209.1	1129.6	1092.4
40°	1224.0	1209.1	1117.2	1045.2	1005.5
42.5°	1147.0	1127.2	1037.8	960.8	916.1
45°	1065.1	1042.8	953.4	873.9	839.2
47.5°	983.2	963.3	881.4	799.4	759.7
50°	896.3	878.9	804.4	722.5	680.3
52.5°	824.3	797.0	725.0	643.0	608.3
55°	739.9	717.5	650.5	573.5	543.7
57.5°	662.9	640.5	578.5	506.5	481.7
60°	590.9	558.6	506.5	444.4	424.5
62.5°	511.4	486.6	441.9	389.8	414.6
65°	439.4	414.6	374.9	382.3	317.8
67.5°	360.0	347.6	312.8	278.1	268.1
70°	293.0	278.1	265.7	228.4	218.5
72.5°	233.4	218.5	201.1	181.2	173.8
75°	176.3	163.9	153.9	146.5	161.4
77.5°	121.7	116.7	109.2	101.8	99.3
80°	79.4	77.0	74.5	72.0	69.5
82.5°	47.2	47.2	47.2	47.2	47.2
85°	24.8	27.3	29.8	32.3	34.8
87.5°	14.9	14.9	17.4	19.9	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)