

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: P562708

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562708
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-35-UNV-82-86-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4395.0 lumens
Efficiency: N/A
Efficacy: 93.9 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

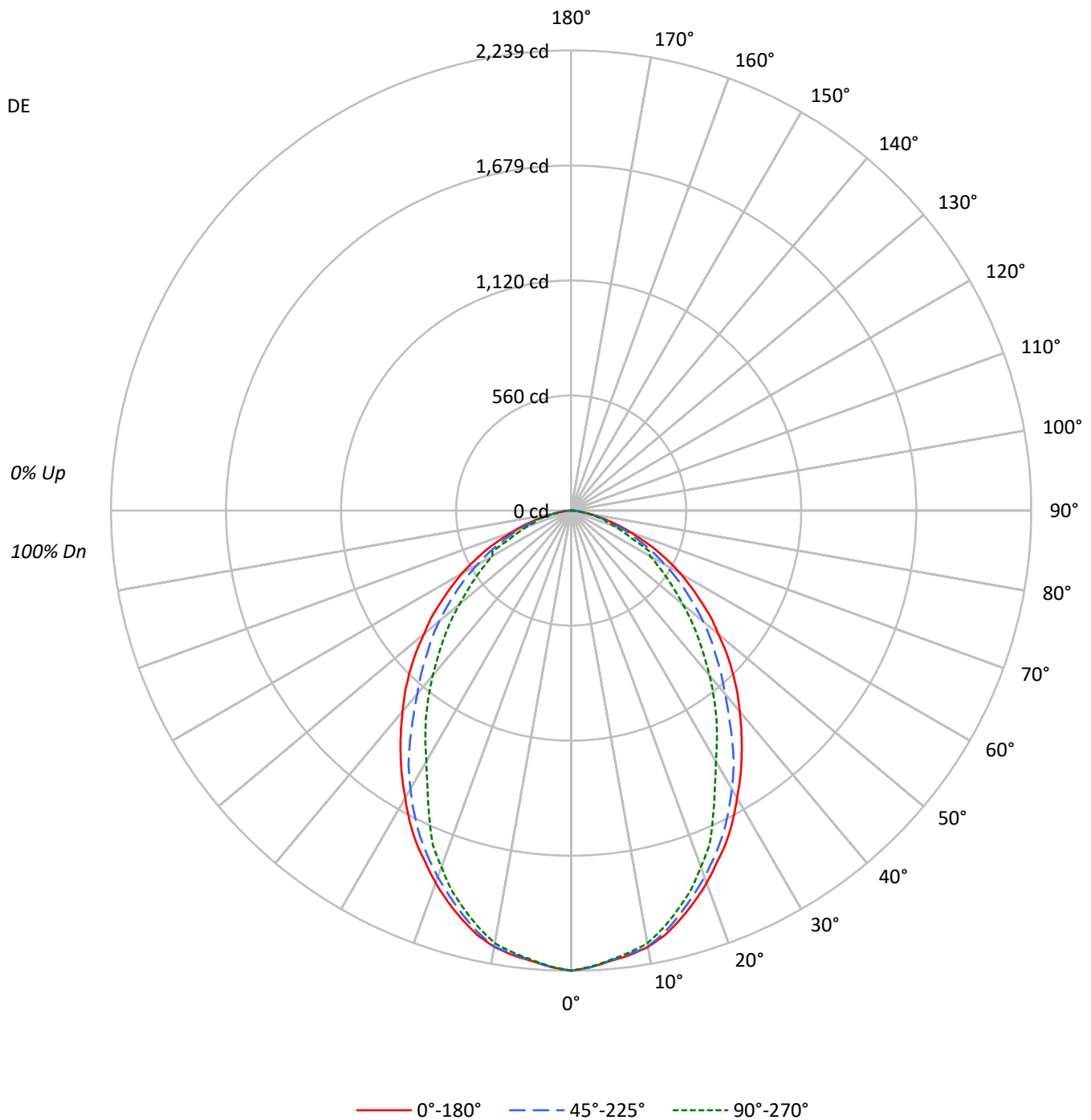
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3012	3012	3012
5°	2971	2968	2964
10°	2945	2942	2921
15°	2866	2837	2798
20°	2761	2716	2642
25°	2647	2590	2428
30°	2509	2429	2188
35°	2376	2245	2024
40°	2241	2046	1841
45°	2113	1891	1665
50°	1956	1755	1485
55°	1809	1591	1330
60°	1658	1421	1191
65°	1458	1244	1055
70°	1201	1089	896
75°	955	834	874
80°	642	601	562
85°	400	480	559

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2113 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.4	4.7
10°-20°	571.9	13.0
20°-30°	791.8	18.0
30°-40°	844.3	19.2
40°-50°	770.2	17.5
50°-60°	603.4	13.7
60°-70°	393.3	8.9
70°-80°	174.2	4.0
80°-90°	37.4	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°	1572.1	35.8
0°-40°	2416.4	55.0
0°-60°	3790.1	86.2
0°-90°	4395.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4395.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2239	2239	2239	2239	2239	
5°	2200	2197	2197	2195	2195	209
15°	2058	2058	2037	2016	2008	578
25°	1783	1773	1744	1682	1636	819
35°	1447	1436	1366	1263	1232	905
45°	1110	1087	994	911	875	855
55°	771	748	678	598	567	692
65°	458	432	391	399	331	451
75°	184	171	160	153	168	197
85°	26	28	31	34	36	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2238.8	2238.8	2238.8	2238.8	2238.8
2.5°	2223.2	2223.2	2223.2	2220.6	2220.6
5°	2199.9	2197.3	2197.3	2194.8	2194.8
7.5°	2181.8	2179.2	2176.6	2174.1	2168.9
10°	2155.9	2155.9	2153.3	2140.4	2137.8
12.5°	2114.5	2111.9	2101.6	2083.5	2078.3
15°	2057.6	2057.6	2036.9	2016.2	2008.4
17.5°	1995.5	1992.9	1967.0	1946.3	1935.9
20°	1928.2	1923.0	1897.1	1863.5	1845.4
22.5°	1853.1	1853.1	1822.1	1778.1	1759.9
25°	1783.2	1772.9	1744.4	1682.3	1635.7
27.5°	1703.0	1687.5	1656.4	1568.4	1514.1
30°	1615.0	1607.2	1563.2	1449.4	1408.0
32.5°	1532.2	1519.2	1472.7	1353.6	1320.0
35°	1446.8	1436.4	1366.5	1263.0	1232.0
37.5°	1361.4	1348.4	1260.4	1177.6	1138.8
40°	1276.0	1260.4	1164.7	1089.6	1048.2
42.5°	1195.7	1175.0	1081.8	1001.6	955.0
45°	1110.3	1087.0	993.9	911.0	874.8
47.5°	1024.9	1004.2	918.8	833.4	792.0
50°	934.3	916.2	838.6	753.2	709.2
52.5°	859.3	830.8	755.7	670.3	634.1
55°	771.3	748.0	678.1	597.9	566.8
57.5°	691.0	667.7	603.0	528.0	502.1
60°	616.0	582.3	528.0	463.3	442.6
62.5°	533.2	507.3	460.7	406.3	432.2
65°	458.1	432.2	390.8	398.6	331.3
67.5°	375.3	362.3	326.1	289.9	279.5
70°	305.4	289.9	276.9	238.1	227.8
72.5°	243.3	227.8	209.6	188.9	181.2
75°	183.8	170.8	160.5	152.7	168.2
77.5°	126.8	121.6	113.9	106.1	103.5
80°	82.8	80.2	77.6	75.1	72.5
82.5°	49.2	49.2	49.2	49.2	49.2
85°	25.9	28.5	31.1	33.6	36.2
87.5°	15.5	15.5	18.1	20.7	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)