

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: P562818

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562818
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-50-UNV-81-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4849.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

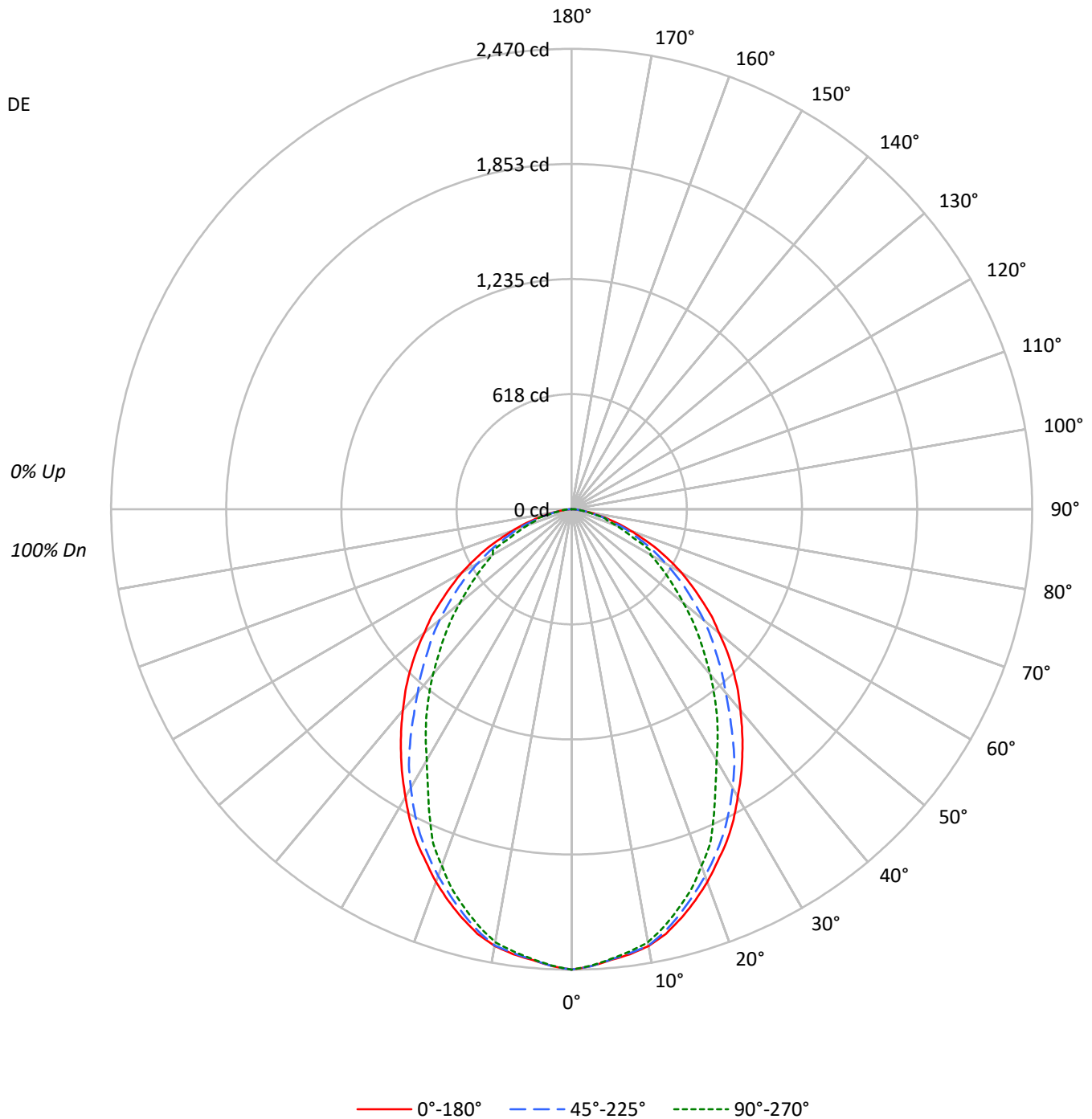
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	3323	3323	3323
5°	3278	3274	3271
10°	3250	3246	3223
15°	3162	3130	3087
20°	3046	2997	2915
25°	2921	2857	2679
30°	2768	2680	2413
35°	2622	2476	2233
40°	2473	2257	2031
45°	2331	2086	1837
50°	2158	1937	1638
55°	1996	1755	1467
60°	1829	1567	1314
65°	1609	1373	1164
70°	1326	1202	989
75°	1054	920	965
80°	708	664	620
85°	442	530	618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2331 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.9	4.7
10°-20°	631.0	13.0
20°-30°	873.6	18.0
30°-40°	931.5	19.2
40°-50°	849.8	17.5
50°-60°	665.7	13.7
60°-70°	433.9	8.9
70°-80°	192.2	4.0
80°-90°	41.3	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°	1734.5	35.8
0°-40°	2666.0	55.0
0°-60°	4181.6	86.2
0°-90°	4849.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4849.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2470	2470	2470	2470	2470	
5°	2427	2424	2424	2422	2422	230
15°	2270	2270	2247	2224	2216	638
25°	1967	1956	1925	1856	1805	903
35°	1596	1585	1508	1394	1359	998
45°	1225	1199	1096	1005	965	944
55°	851	825	748	660	625	763
65°	505	477	431	440	366	498
75°	203	188	177	168	186	217
85°	29	31	34	37	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2470.0	2470.0	2470.0	2470.0	2470.0
2.5°	2452.9	2452.9	2452.9	2450.0	2450.0
5°	2427.2	2424.3	2424.3	2421.5	2421.5
7.5°	2407.2	2404.3	2401.5	2398.6	2392.9
10°	2378.6	2378.6	2375.8	2361.5	2358.7
12.5°	2333.0	2330.1	2318.7	2298.7	2293.0
15°	2270.1	2270.1	2247.3	2224.4	2215.9
17.5°	2201.6	2198.7	2170.2	2147.3	2135.9
20°	2127.4	2121.6	2093.1	2056.0	2036.0
22.5°	2044.5	2044.5	2010.3	1961.7	1941.7
25°	1967.4	1956.0	1924.6	1856.1	1804.7
27.5°	1878.9	1861.8	1827.5	1730.4	1670.5
30°	1781.8	1773.3	1724.7	1599.1	1553.4
32.5°	1690.5	1676.2	1624.8	1493.4	1456.3
35°	1596.2	1584.8	1507.7	1393.5	1359.2
37.5°	1502.0	1487.7	1390.6	1299.3	1256.4
40°	1407.8	1390.6	1285.0	1202.2	1156.5
42.5°	1319.2	1296.4	1193.6	1105.1	1053.7
45°	1225.0	1199.3	1096.5	1005.1	965.2
47.5°	1130.8	1107.9	1013.7	919.5	873.8
50°	1030.8	1010.9	925.2	831.0	782.4
52.5°	948.0	916.6	833.8	739.6	699.6
55°	850.9	825.2	748.1	659.6	625.4
57.5°	762.4	736.7	665.3	582.5	554.0
60°	679.6	642.5	582.5	511.1	488.3
62.5°	588.2	559.7	508.3	448.3	476.9
65°	505.4	476.9	431.2	439.7	365.5
67.5°	414.0	399.8	359.8	319.8	308.4
70°	337.0	319.8	305.5	262.7	251.3
72.5°	268.4	251.3	231.3	208.5	199.9
75°	202.7	188.5	177.0	168.5	185.6
77.5°	139.9	134.2	125.6	117.1	114.2
80°	91.4	88.5	85.7	82.8	80.0
82.5°	54.3	54.3	54.3	54.3	54.3
85°	28.6	31.4	34.3	37.1	40.0
87.5°	17.1	17.1	20.0	22.8	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)