

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: P562761

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562761
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-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4722.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

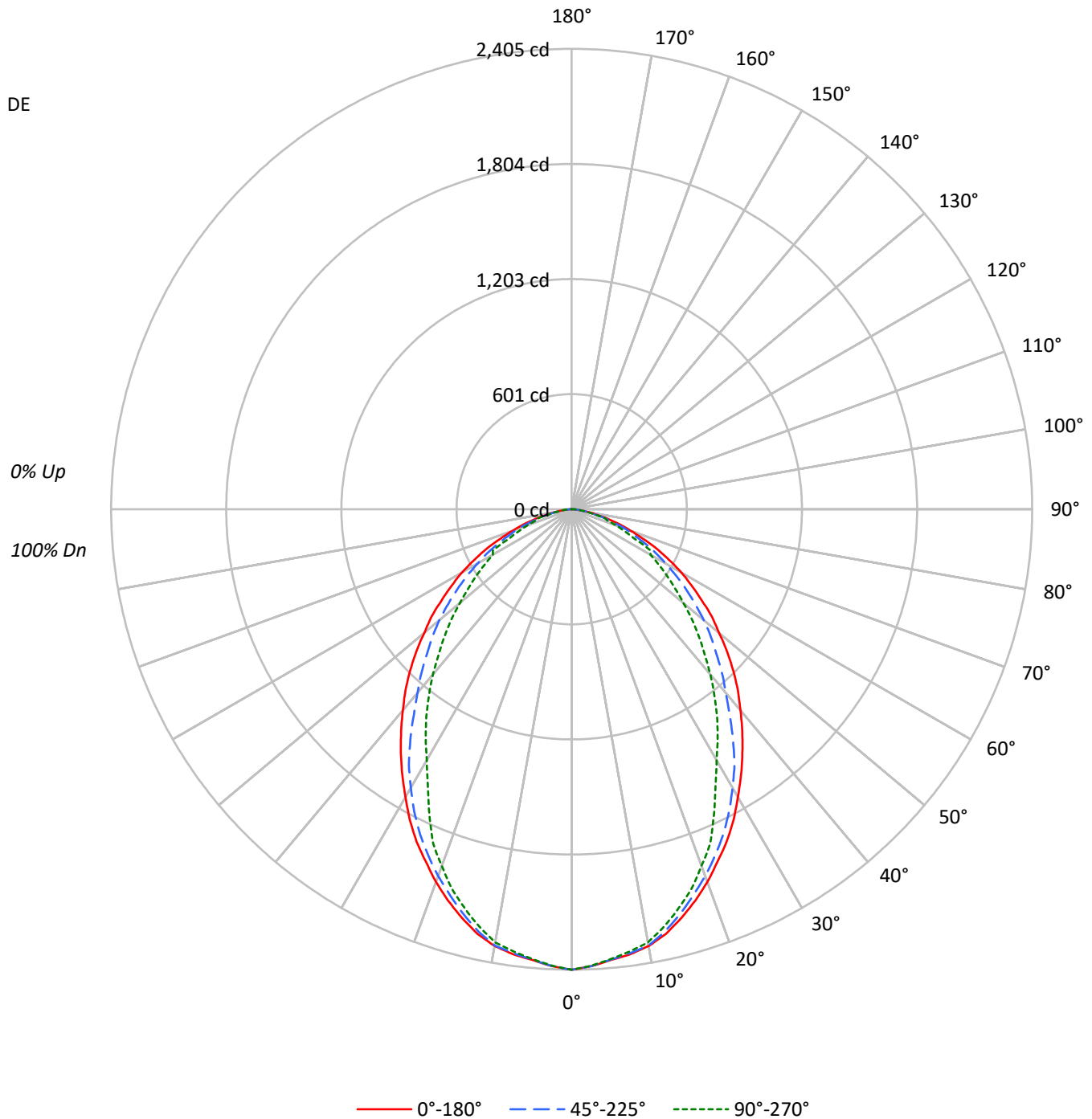
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3236	3236	3236
5°	3192	3189	3185
10°	3165	3161	3138
15°	3079	3048	3006
20°	2966	2919	2839
25°	2844	2782	2609
30°	2696	2609	2350
35°	2553	2412	2174
40°	2408	2198	1978
45°	2270	2032	1788
50°	2101	1886	1595
55°	1944	1709	1429
60°	1781	1527	1280
65°	1567	1337	1133
70°	1291	1170	963
75°	1026	896	939
80°	690	646	604
85°	429	516	601

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2270 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.9	4.7
10°-20°	614.5	13.0
20°-30°	850.7	18.0
30°-40°	907.1	19.2
40°-50°	827.5	17.5
50°-60°	648.3	13.7
60°-70°	422.5	8.9
70°-80°	187.2	4.0
80°-90°	40.2	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°	1689.1	35.8
0°-40°	2596.2	55.0
0°-60°	4072.1	86.2
0°-90°	4722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4722.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2405	2405	2405	2405	2405	
5°	2364	2361	2361	2358	2358	224
15°	2211	2211	2188	2166	2158	621
25°	1916	1905	1874	1808	1757	880
35°	1554	1543	1468	1357	1324	972
45°	1193	1168	1068	979	940	919
55°	829	804	728	642	609	743
65°	492	464	420	428	356	485
75°	197	184	172	164	181	212
85°	28	31	33	36	39	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2405.3	2405.3	2405.3	2405.3	2405.3
2.5°	2388.6	2388.6	2388.6	2385.9	2385.9
5°	2363.6	2360.8	2360.8	2358.1	2358.1
7.5°	2344.1	2341.4	2338.6	2335.8	2330.2
10°	2316.3	2316.3	2313.6	2299.7	2296.9
12.5°	2271.8	2269.1	2257.9	2238.5	2232.9
15°	2210.7	2210.7	2188.4	2166.2	2157.8
17.5°	2143.9	2141.2	2113.3	2091.1	2080.0
20°	2071.6	2066.1	2038.3	2002.1	1982.7
22.5°	1991.0	1991.0	1957.6	1910.4	1890.9
25°	1915.9	1904.8	1874.2	1807.5	1757.4
27.5°	1829.7	1813.0	1779.7	1685.1	1626.7
30°	1735.2	1726.8	1679.6	1557.2	1512.7
32.5°	1646.2	1632.3	1582.2	1454.3	1418.2
35°	1554.4	1543.3	1468.2	1357.0	1323.6
37.5°	1462.7	1448.8	1354.2	1265.2	1223.5
40°	1370.9	1354.2	1251.3	1170.7	1126.2
42.5°	1284.7	1262.4	1162.3	1076.1	1026.1
45°	1192.9	1167.9	1067.8	978.8	939.9
47.5°	1101.2	1078.9	987.2	895.4	850.9
50°	1003.8	984.4	901.0	809.2	761.9
52.5°	923.2	892.6	812.0	720.2	681.3
55°	828.7	803.6	728.5	642.3	609.0
57.5°	742.5	717.4	647.9	567.3	539.5
60°	661.8	625.7	567.3	497.7	475.5
62.5°	572.8	545.0	495.0	436.6	464.4
65°	492.2	464.4	419.9	428.2	355.9
67.5°	403.2	389.3	350.4	311.4	300.3
70°	328.1	311.4	297.5	255.8	244.7
72.5°	261.4	244.7	225.2	203.0	194.7
75°	197.4	183.5	172.4	164.1	180.7
77.5°	136.3	130.7	122.4	114.0	111.2
80°	89.0	86.2	83.4	80.6	77.9
82.5°	52.8	52.8	52.8	52.8	52.8
85°	27.8	30.6	33.4	36.1	38.9
87.5°	16.7	16.7	19.5	22.2	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)