

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: P562846

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-82-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562846
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-82-97-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4728.0 lumens
Efficiency: N/A
Efficacy: 101.0 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

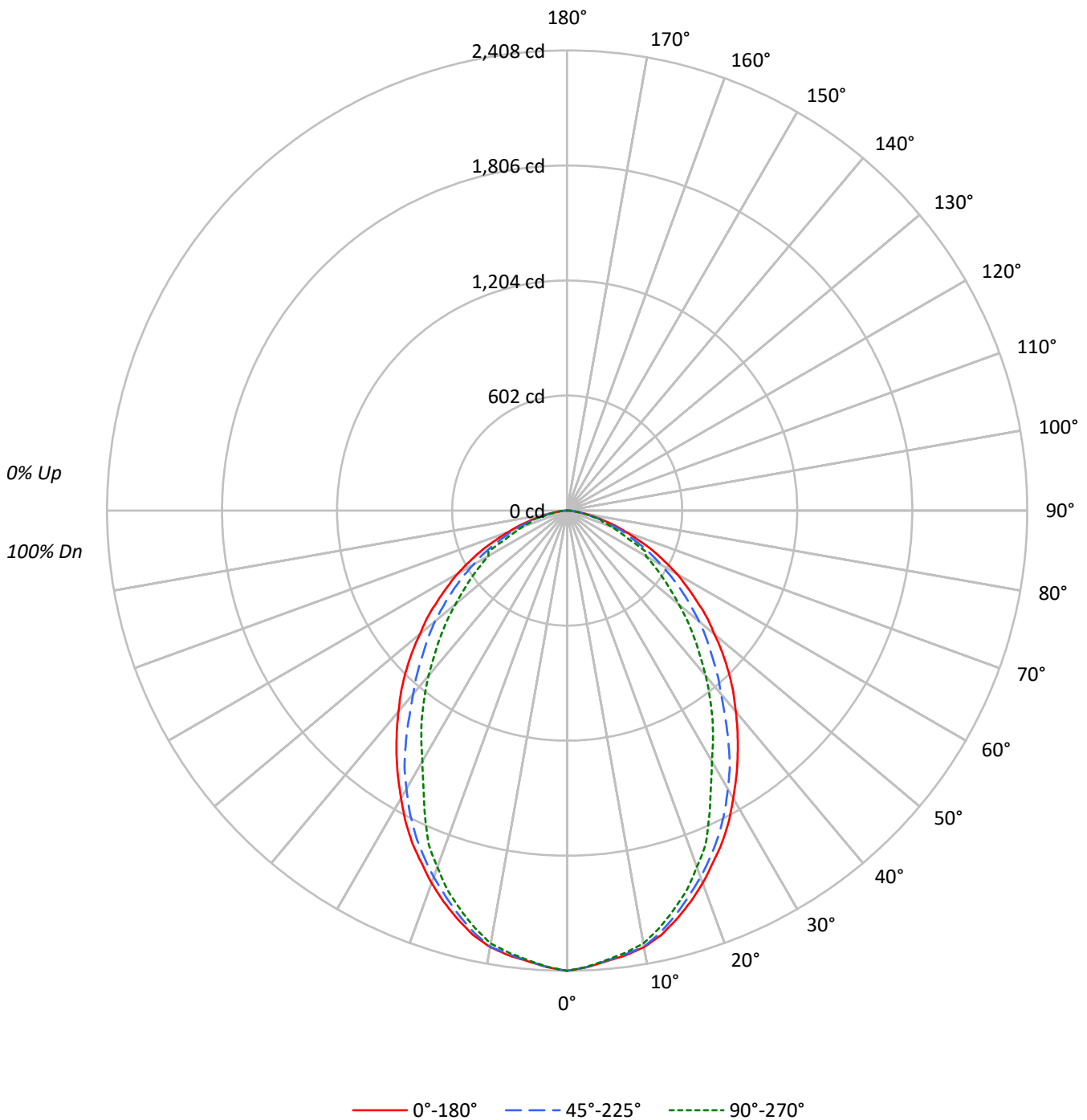
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	3240	3240	3240
5°	3196	3193	3189
10°	3169	3165	3142
15°	3083	3052	3010
20°	2970	2922	2842
25°	2848	2786	2612
30°	2699	2613	2353
35°	2556	2415	2177
40°	2411	2201	1981
45°	2273	2034	1791
50°	2104	1888	1597
55°	1946	1711	1430
60°	1783	1528	1281
65°	1569	1338	1135
70°	1292	1172	964
75°	1028	897	941
80°	690	647	604
85°	429	516	602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2273 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.2	4.7
10°-20°	615.3	13.0
20°-30°	851.8	18.0
30°-40°	908.3	19.2
40°-50°	828.6	17.5
50°-60°	649.1	13.7
60°-70°	423.1	8.9
70°-80°	187.4	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°	1691.2	35.8
0°-40°	2599.5	55.0
0°-60°	4077.2	86.2
0°-90°	4728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2408	2408	2408	2408	2408	
5°	2367	2364	2364	2361	2361	225
15°	2214	2214	2191	2169	2161	622
25°	1918	1907	1877	1810	1760	881
35°	1556	1545	1470	1359	1325	973
45°	1194	1169	1069	980	941	920
55°	830	805	730	643	610	744
65°	493	465	420	429	356	486
75°	198	184	173	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°	2408.4	2408.4	2408.4	2408.4	2408.4
2.5°	2391.7	2391.7	2391.7	2388.9	2388.9
5°	2366.6	2363.8	2363.8	2361.0	2361.0
7.5°	2347.1	2344.3	2341.6	2338.8	2333.2
10°	2319.3	2319.3	2316.5	2302.6	2299.8
12.5°	2274.7	2272.0	2260.8	2241.3	2235.8
15°	2213.5	2213.5	2191.2	2168.9	2160.6
17.5°	2146.7	2143.9	2116.0	2093.8	2082.6
20°	2074.3	2068.7	2040.9	2004.7	1985.2
22.5°	1993.5	1993.5	1960.1	1912.8	1893.3
25°	1918.4	1907.2	1876.6	1809.8	1759.6
27.5°	1832.0	1815.3	1781.9	1687.3	1628.8
30°	1737.4	1729.0	1681.7	1559.2	1514.6
32.5°	1648.3	1634.4	1584.2	1456.2	1420.0
35°	1556.4	1545.3	1470.1	1358.7	1325.3
37.5°	1464.5	1450.6	1355.9	1266.8	1225.1
40°	1372.6	1355.9	1252.9	1172.2	1127.6
42.5°	1286.3	1264.1	1163.8	1077.5	1027.4
45°	1194.4	1169.4	1069.2	980.1	941.1
47.5°	1102.6	1080.3	988.4	896.5	852.0
50°	1005.1	985.6	902.1	810.2	762.9
52.5°	924.4	893.7	813.0	721.1	682.1
55°	829.7	804.6	729.5	643.2	609.8
57.5°	743.4	718.3	648.7	568.0	540.1
60°	662.7	626.5	568.0	498.4	476.1
62.5°	573.6	545.7	495.6	437.1	465.0
65°	492.8	465.0	420.4	428.8	356.4
67.5°	403.7	389.8	350.8	311.8	300.7
70°	328.5	311.8	297.9	256.2	245.0
72.5°	261.7	245.0	225.5	203.3	194.9
75°	197.7	183.8	172.6	164.3	181.0
77.5°	136.4	130.9	122.5	114.2	111.4
80°	89.1	86.3	83.5	80.7	78.0
82.5°	52.9	52.9	52.9	52.9	52.9
85°	27.8	30.6	33.4	36.2	39.0
87.5°	16.7	16.7	19.5	22.3	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)