

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: P562103

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562103
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-50-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4610.0 lumens
Efficiency: N/A
Efficacy: 106.7 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

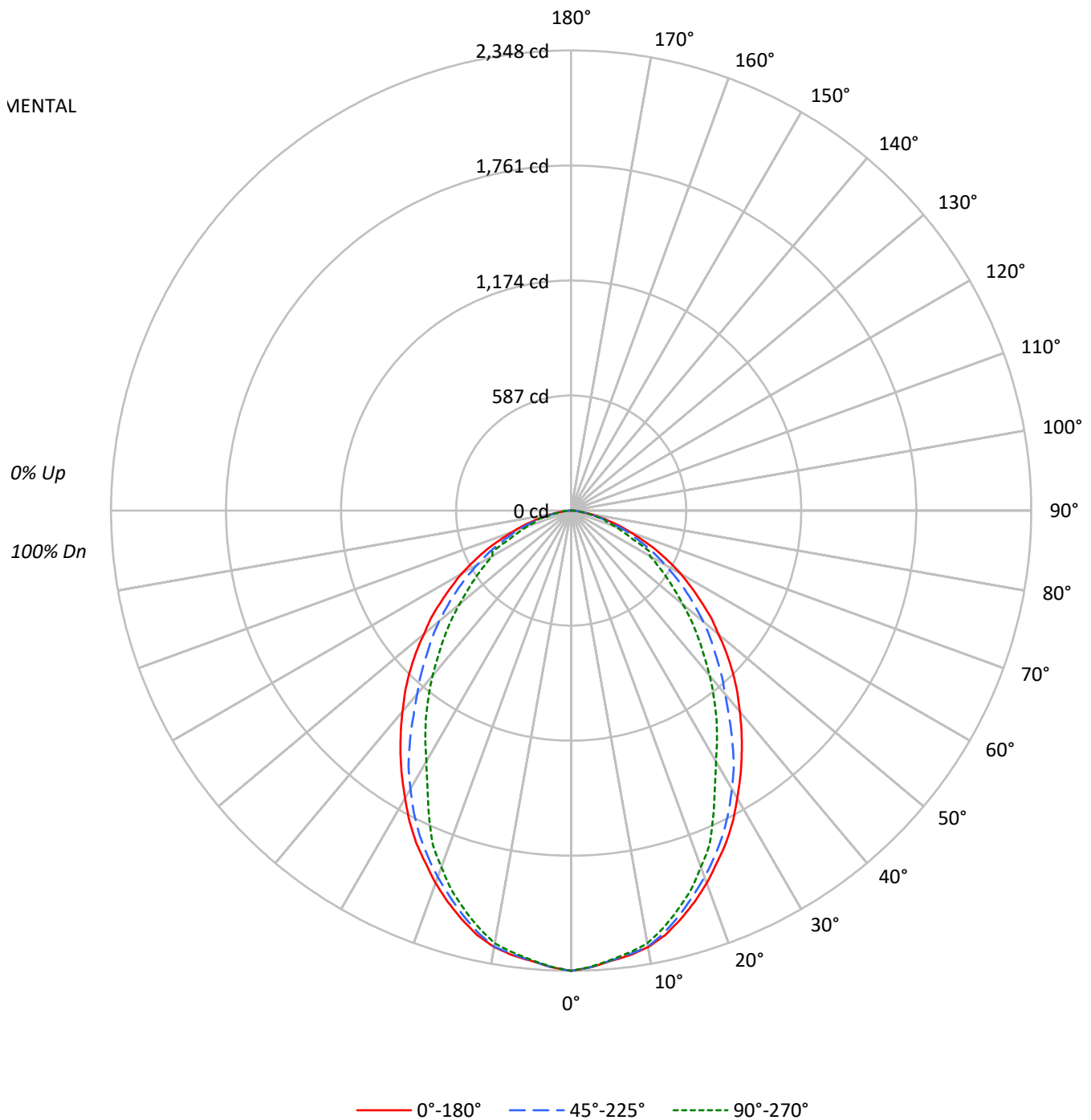
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3160	3160	3160
5°	3117	3113	3109
10°	3090	3086	3064
15°	3006	2976	2935
20°	2896	2849	2771
25°	2777	2716	2547
30°	2632	2547	2294
35°	2493	2354	2122
40°	2351	2146	1931
45°	2216	1984	1746
50°	2051	1841	1557
55°	1898	1669	1395
60°	1739	1490	1249
65°	1530	1305	1106
70°	1260	1143	940
75°	1002	875	918
80°	673	631	589
85°	418	503	587

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2216 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.6	4.7
10°-20°	599.9	13.0
20°-30°	830.5	18.0
30°-40°	885.6	19.2
40°-50°	807.9	17.5
50°-60°	632.9	13.7
60°-70°	412.5	8.9
70°-80°	182.8	4.0
80°-90°	39.2	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°	1649.0	35.8
0°-40°	2534.6	55.0
0°-60°	3975.5	86.2
0°-90°	4610.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4610.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2348	2348	2348	2348	2348	
5°	2308	2305	2305	2302	2302	219
15°	2158	2158	2136	2115	2107	607
25°	1870	1860	1830	1765	1716	859
35°	1518	1507	1433	1325	1292	949
45°	1165	1140	1042	956	918	897
55°	809	785	711	627	594	726
65°	480	453	410	418	348	474
75°	193	179	168	160	176	207
85°	27	30	33	35	38	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2348.3	2348.3	2348.3	2348.3	2348.3
2.5°	2332.0	2332.0	2332.0	2329.3	2329.3
5°	2307.6	2304.8	2304.8	2302.1	2302.1
7.5°	2288.5	2285.8	2283.1	2280.4	2275.0
10°	2261.4	2261.4	2258.7	2245.1	2242.4
12.5°	2218.0	2215.2	2204.4	2185.4	2180.0
15°	2158.2	2158.2	2136.5	2114.8	2106.7
17.5°	2093.1	2090.4	2063.2	2041.5	2030.6
20°	2022.5	2017.1	1989.9	1954.6	1935.6
22.5°	1943.8	1943.8	1911.2	1865.0	1846.0
25°	1870.5	1859.6	1829.8	1764.6	1715.7
27.5°	1786.3	1770.0	1737.5	1645.1	1588.1
30°	1694.0	1685.9	1639.7	1520.3	1476.8
32.5°	1607.1	1593.6	1544.7	1419.8	1384.5
35°	1517.6	1506.7	1433.4	1324.8	1292.2
37.5°	1428.0	1414.4	1322.1	1235.2	1194.5
40°	1338.4	1322.1	1221.6	1142.9	1099.5
42.5°	1254.2	1232.5	1134.8	1050.6	1001.7
45°	1164.6	1140.2	1042.5	955.6	917.6
47.5°	1075.0	1053.3	963.7	874.2	830.7
50°	980.0	961.0	879.6	790.0	743.8
52.5°	901.3	871.4	792.7	703.1	665.1
55°	809.0	784.6	711.3	627.1	594.5
57.5°	724.8	700.4	632.5	553.8	526.7
60°	646.1	610.8	553.8	485.9	464.2
62.5°	559.2	532.1	483.2	426.2	453.4
65°	480.5	453.4	409.9	418.1	347.5
67.5°	393.6	380.1	342.1	304.1	293.2
70°	320.3	304.1	290.5	249.8	238.9
72.5°	255.2	238.9	219.9	198.2	190.0
75°	192.7	179.2	168.3	160.2	176.5
77.5°	133.0	127.6	119.4	111.3	108.6
80°	86.9	84.2	81.4	78.7	76.0
82.5°	51.6	51.6	51.6	51.6	51.6
85°	27.1	29.9	32.6	35.3	38.0
87.5°	16.3	16.3	19.0	21.7	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)