

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: P562832

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562832
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-82-84-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4843.0 lumens
Efficiency: N/A
Efficacy: 103.5 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

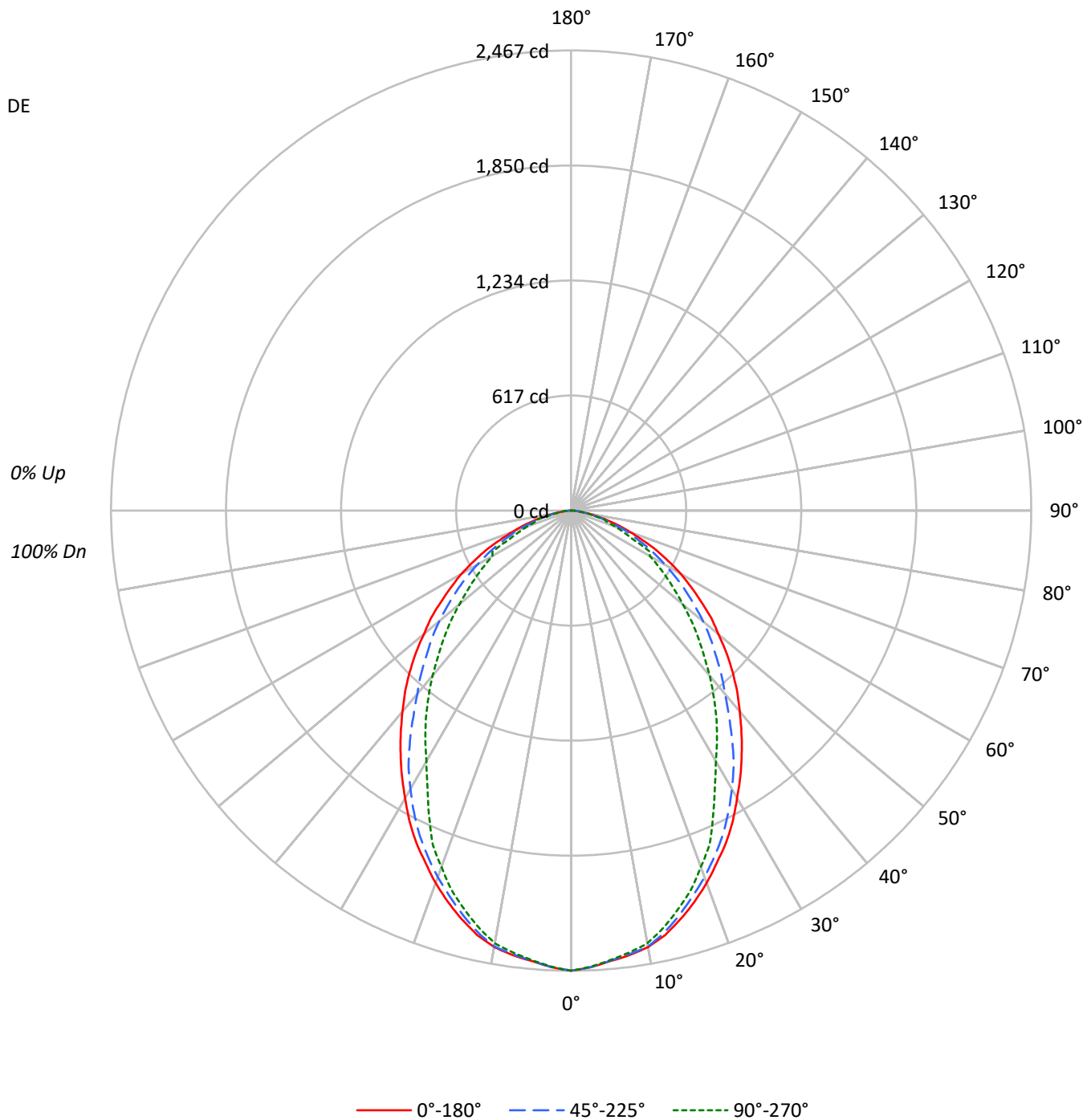
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3319	3319	3319
5°	3274	3270	3266
10°	3246	3242	3218
15°	3158	3126	3083
20°	3042	2993	2912
25°	2917	2854	2676
30°	2765	2676	2410
35°	2619	2473	2230
40°	2470	2254	2029
45°	2328	2084	1834
50°	2155	1934	1636
55°	1994	1753	1465
60°	1827	1566	1312
65°	1607	1371	1162
70°	1324	1201	987
75°	1053	919	964
80°	707	663	619
85°	440	528	616

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2328 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.6	4.7
10°-20°	630.2	13.0
20°-30°	872.5	18.0
30°-40°	930.3	19.2
40°-50°	848.8	17.5
50°-60°	664.9	13.7
60°-70°	433.4	8.9
70°-80°	192.0	4.0
80°-90°	41.2	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°	1732.4	35.8
0°-40°	2662.7	55.0
0°-60°	4176.4	86.2
0°-90°	4843.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4843.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2467	2467	2467	2467	2467	
5°	2424	2421	2421	2418	2418	230
15°	2267	2267	2244	2222	2213	637
25°	1965	1954	1922	1854	1802	902
35°	1594	1583	1506	1392	1358	997
45°	1224	1198	1095	1004	964	942
55°	850	824	747	659	625	762
65°	505	476	431	439	365	497
75°	202	188	177	168	185	217
85°	28	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°	2467.0	2467.0	2467.0	2467.0	2467.0
2.5°	2449.8	2449.8	2449.8	2447.0	2447.0
5°	2424.2	2421.3	2421.3	2418.5	2418.5
7.5°	2404.2	2401.4	2398.5	2395.7	2390.0
10°	2375.7	2375.7	2372.8	2358.6	2355.7
12.5°	2330.1	2327.2	2315.8	2295.8	2290.1
15°	2267.3	2267.3	2244.5	2221.7	2213.1
17.5°	2198.9	2196.0	2167.5	2144.7	2133.3
20°	2124.7	2119.0	2090.5	2053.4	2033.5
22.5°	2042.0	2042.0	2007.8	1959.3	1939.3
25°	1965.0	1953.6	1922.2	1853.8	1802.4
27.5°	1876.6	1859.5	1825.3	1728.3	1668.4
30°	1779.6	1771.1	1722.6	1597.1	1551.5
32.5°	1688.4	1674.1	1622.8	1491.6	1454.5
35°	1594.3	1582.8	1505.8	1391.8	1357.5
37.5°	1500.1	1485.9	1388.9	1297.6	1254.9
40°	1406.0	1388.9	1283.4	1200.7	1155.1
42.5°	1317.6	1294.8	1192.1	1103.7	1052.4
45°	1223.5	1197.8	1095.2	1003.9	964.0
47.5°	1129.4	1106.6	1012.5	918.3	872.7
50°	1029.6	1009.6	924.0	829.9	781.4
52.5°	946.9	915.5	832.8	738.7	698.7
55°	849.9	824.2	747.2	658.8	624.6
57.5°	761.5	735.8	664.5	581.8	553.3
60°	678.8	641.7	581.8	510.5	487.7
62.5°	587.5	559.0	507.7	447.8	476.3
65°	504.8	476.3	430.6	439.2	365.1
67.5°	413.5	399.3	359.3	319.4	308.0
70°	336.5	319.4	305.2	262.4	251.0
72.5°	268.1	251.0	231.0	208.2	199.6
75°	202.5	188.2	176.8	168.3	185.4
77.5°	139.7	134.0	125.5	116.9	114.1
80°	91.3	88.4	85.6	82.7	79.9
82.5°	54.2	54.2	54.2	54.2	54.2
85°	28.5	31.4	34.2	37.1	39.9
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)