

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: P562258

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562258
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-LD4-1LO-50-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 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: 2374.0 lumens
Efficiency: N/A
Efficacy: 101.5 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

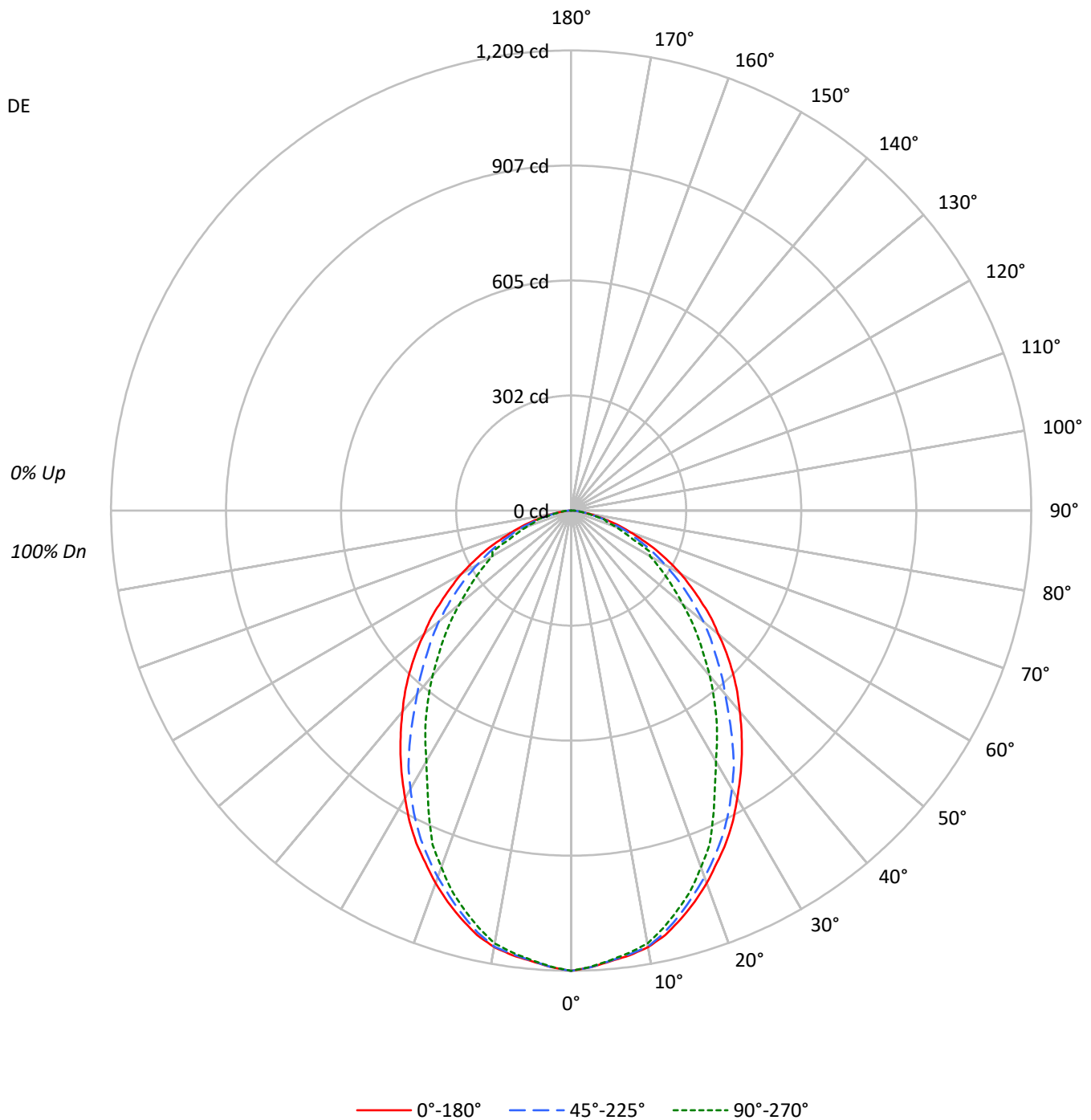
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1627	1627	1627
5°	1605	1603	1601
10°	1591	1589	1578
15°	1548	1533	1511
20°	1491	1467	1427
25°	1430	1399	1312
30°	1355	1312	1182
35°	1284	1213	1093
40°	1211	1105	994
45°	1141	1021	899
50°	1056	948	802
55°	977	859	718
60°	895	767	643
65°	788	672	570
70°	649	589	484
75°	516	451	473
80°	346	325	303
85°	216	259	303

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1141 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.6	4.7
10°-20°	308.9	13.0
20°-30°	427.7	18.0
30°-40°	456.1	19.2
40°-50°	416.1	17.5
50°-60°	325.9	13.7
60°-70°	212.4	8.9
70°-80°	94.1	4.0
80°-90°	20.2	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°	849.2	35.8
0°-40°	1305.2	55.0
0°-60°	2047.2	86.2
0°-90°	2374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2374.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1209	1209	1209	1209	1209	
5°	1188	1187	1187	1186	1186	113
15°	1111	1111	1100	1089	1085	312
25°	963	958	942	909	884	442
35°	782	776	738	682	666	489
45°	600	587	537	492	472	462
55°	417	404	366	323	306	374
65°	247	234	211	215	179	244
75°	99	92	87	82	91	106
85°	14	15	17	18	20	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1209.3	1209.3	1209.3	1209.3	1209.3
2.5°	1200.9	1200.9	1200.9	1199.5	1199.5
5°	1188.3	1186.9	1186.9	1185.5	1185.5
7.5°	1178.5	1177.1	1175.7	1174.3	1171.5
10°	1164.5	1164.5	1163.1	1156.2	1154.8
12.5°	1142.2	1140.8	1135.2	1125.4	1122.6
15°	1111.4	1111.4	1100.2	1089.1	1084.9
17.5°	1077.9	1076.5	1062.5	1051.3	1045.7
20°	1041.5	1038.7	1024.7	1006.6	996.8
22.5°	1001.0	1001.0	984.2	960.4	950.7
25°	963.2	957.6	942.3	908.7	883.5
27.5°	919.9	911.5	894.7	847.2	817.8
30°	872.4	868.2	844.4	782.9	760.5
32.5°	827.6	820.6	795.5	731.2	713.0
35°	781.5	775.9	738.2	682.2	665.5
37.5°	735.4	728.4	680.8	636.1	615.1
40°	689.2	680.8	629.1	588.6	566.2
42.5°	645.9	634.7	584.4	541.0	515.9
45°	599.7	587.2	536.8	492.1	472.5
47.5°	553.6	542.4	496.3	450.2	427.8
50°	504.7	494.9	453.0	406.8	383.1
52.5°	464.1	448.8	408.2	362.1	342.5
55°	416.6	404.0	366.3	322.9	306.2
57.5°	373.3	360.7	325.7	285.2	271.2
60°	332.7	314.6	285.2	250.2	239.1
62.5°	288.0	274.0	248.8	219.5	233.5
65°	247.4	233.5	211.1	215.3	178.9
67.5°	202.7	195.7	176.2	156.6	151.0
70°	165.0	156.6	149.6	128.6	123.0
72.5°	131.4	123.0	113.2	102.1	97.9
75°	99.3	92.3	86.7	82.5	90.9
77.5°	68.5	65.7	61.5	57.3	55.9
80°	44.7	43.3	41.9	40.5	39.1
82.5°	26.6	26.6	26.6	26.6	26.6
85°	14.0	15.4	16.8	18.2	19.6
87.5°	8.4	8.4	9.8	11.2	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)