

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: P562244

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562244
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-81-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2397.0 lumens
Efficiency: N/A
Efficacy: 102.4 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

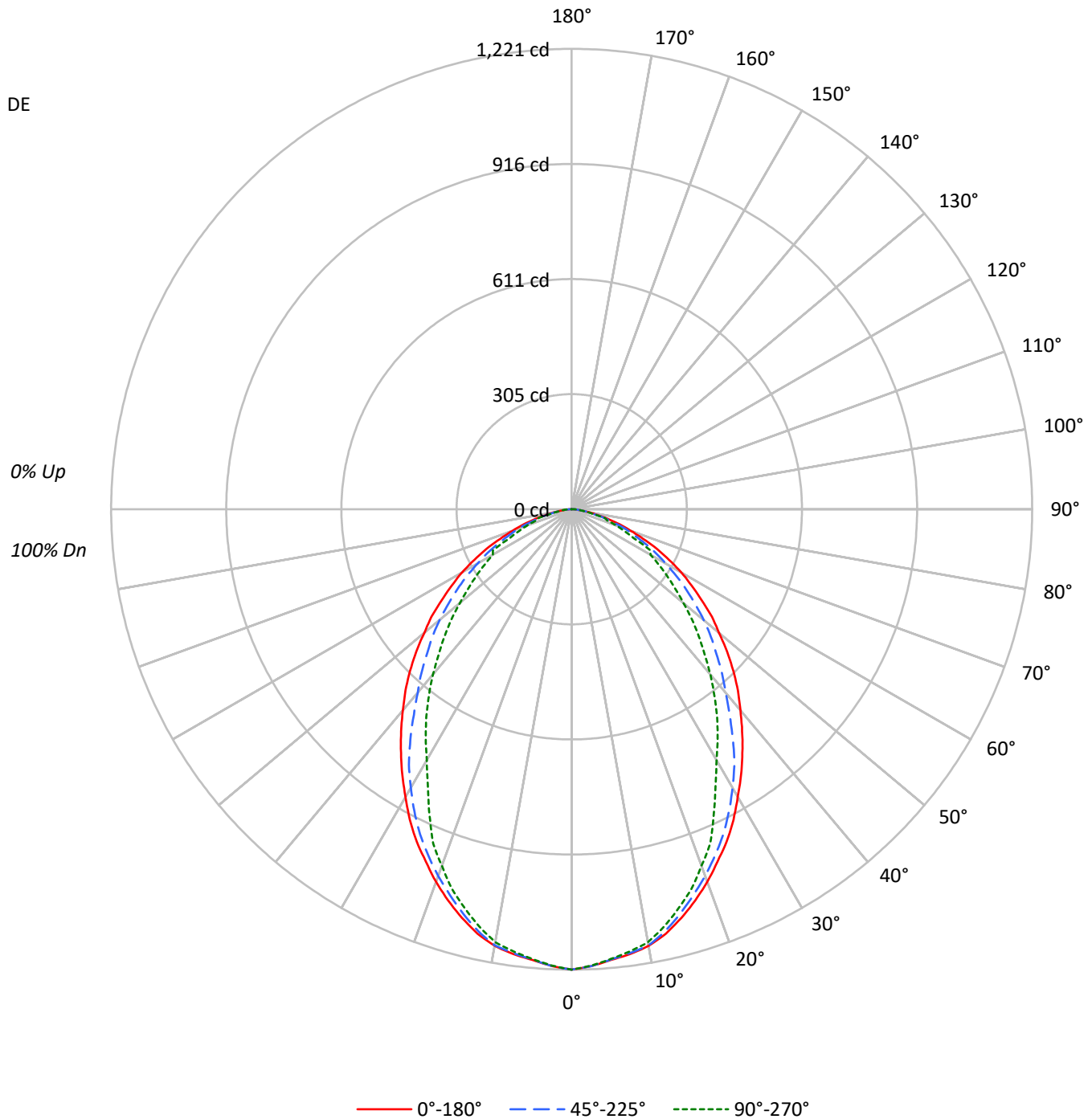
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1643	1643	1643
5°	1620	1619	1617
10°	1606	1605	1593
15°	1563	1547	1526
20°	1506	1482	1441
25°	1444	1412	1324
30°	1368	1325	1193
35°	1296	1224	1104
40°	1222	1116	1004
45°	1152	1031	908
50°	1067	957	810
55°	987	867	725
60°	904	775	650
65°	795	678	575
70°	655	594	489
75°	521	455	477
80°	350	328	306
85°	218	261	306

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1152 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.7	4.7
10°-20°	311.9	13.0
20°-30°	431.8	18.0
30°-40°	460.5	19.2
40°-50°	420.1	17.5
50°-60°	329.1	13.7
60°-70°	214.5	8.9
70°-80°	95.0	4.0
80°-90°	20.4	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°	857.4	35.8
0°-40°	1317.9	55.0
0°-60°	2067.1	86.2
0°-90°	2397.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2397.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1221	1221	1221	1221	1221	
5°	1200	1198	1198	1197	1197	114
15°	1122	1122	1111	1100	1095	315
25°	973	967	951	918	892	447
35°	789	783	745	689	672	493
45°	606	593	542	497	477	466
55°	421	408	370	326	309	377
65°	250	236	213	217	181	246
75°	100	93	88	83	92	107
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1221.0	1221.0	1221.0	1221.0	1221.0
2.5°	1212.5	1212.5	1212.5	1211.1	1211.1
5°	1199.8	1198.4	1198.4	1197.0	1197.0
7.5°	1189.9	1188.5	1187.1	1185.7	1182.9
10°	1175.8	1175.8	1174.4	1167.4	1165.9
12.5°	1153.2	1151.8	1146.2	1136.3	1133.5
15°	1122.2	1122.2	1110.9	1099.6	1095.4
17.5°	1088.3	1086.9	1072.8	1061.5	1055.8
20°	1051.6	1048.8	1034.7	1016.3	1006.4
22.5°	1010.7	1010.7	993.7	969.7	959.9
25°	972.6	966.9	951.4	917.5	892.1
27.5°	928.8	920.3	903.4	855.4	825.8
30°	880.8	876.6	852.6	790.5	767.9
32.5°	835.6	828.6	803.2	738.2	719.9
35°	789.1	783.4	745.3	688.8	671.9
37.5°	742.5	735.4	687.4	642.3	621.1
40°	695.9	687.4	635.2	594.3	571.7
42.5°	652.1	640.8	590.0	546.3	520.9
45°	605.6	592.9	542.0	496.9	477.1
47.5°	559.0	547.7	501.1	454.5	431.9
50°	509.6	499.7	457.3	410.8	386.8
52.5°	468.6	453.1	412.2	365.6	345.8
55°	420.6	407.9	369.8	326.1	309.1
57.5°	376.9	364.2	328.9	288.0	273.8
60°	336.0	317.6	288.0	252.7	241.4
62.5°	290.8	276.7	251.3	221.6	235.7
65°	249.8	235.7	213.1	217.4	180.7
67.5°	204.7	197.6	177.9	158.1	152.4
70°	166.6	158.1	151.0	129.9	124.2
72.5°	132.7	124.2	114.3	103.0	98.8
75°	100.2	93.2	87.5	83.3	91.8
77.5°	69.2	66.3	62.1	57.9	56.5
80°	45.2	43.8	42.3	40.9	39.5
82.5°	26.8	26.8	26.8	26.8	26.8
85°	14.1	15.5	16.9	18.4	19.8
87.5°	8.5	8.5	9.9	11.3	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)