

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: P563465

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563465
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-LD4-3STD-35-UNV-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9391.0 lumens
Efficiency: N/A
Efficacy: 94.0 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

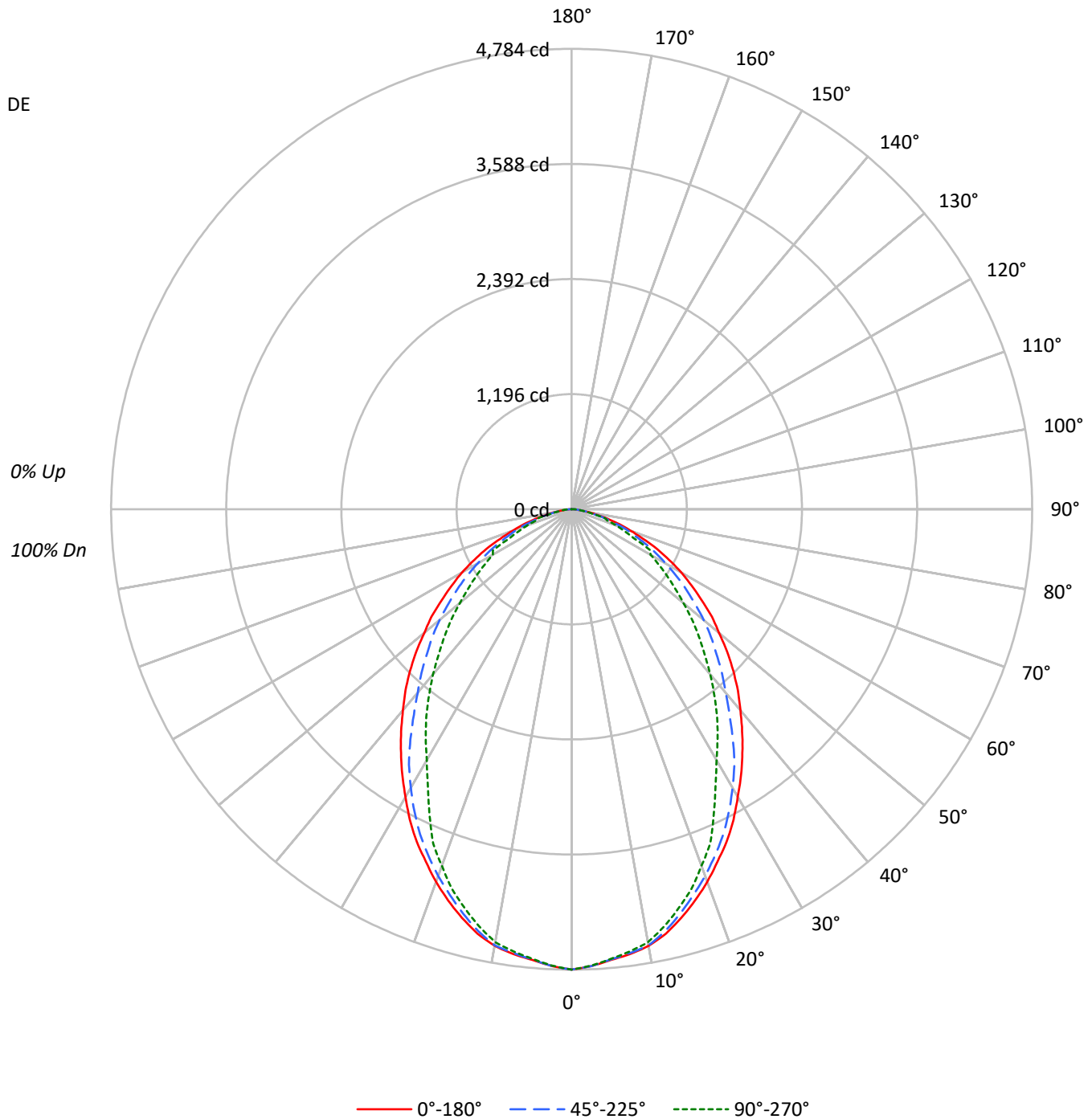
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6436	6436	6436
5°	6349	6341	6334
10°	6294	6286	6241
15°	6124	6063	5978
20°	5899	5804	5646
25°	5657	5534	5189
30°	5361	5190	4674
35°	5078	4796	4324
40°	4789	4371	3934
45°	4514	4041	3557
50°	4179	3751	3172
55°	3866	3399	2841
60°	3542	3036	2545
65°	3117	2659	2254
70°	2567	2328	1915
75°	2041	1783	1869
80°	1371	1285	1199
85°	854	1025	1195

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4514 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	445.3	4.7
10°-20°	1222.1	13.0
20°-30°	1691.9	18.0
30°-40°	1804.0	19.2
40°-50°	1645.8	17.5
50°-60°	1289.3	13.7
60°-70°	840.3	8.9
70°-80°	372.3	4.0
80°-90°	79.9	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°	3359.2	35.8
0°-40°	5163.3	55.0
0°-60°	8098.4	86.2
0°-90°	9391.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9391.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4784	4784	4784	4784	4784	
5°	4701	4695	4695	4690	4690	446
15°	4396	4396	4352	4308	4292	1236
25°	3810	3788	3727	3595	3495	1749
35°	3091	3069	2920	2699	2632	1933
45°	2372	2323	2124	1947	1869	1828
55°	1648	1598	1449	1278	1211	1478
65°	979	924	835	852	708	965
75°	393	365	343	326	360	421
85°	55	61	66	72	77	77
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4783.6	4783.6	4783.6	4783.6	4783.6
2.5°	4750.5	4750.5	4750.5	4744.9	4744.9
5°	4700.7	4695.2	4695.2	4689.6	4689.6
7.5°	4662.0	4656.5	4650.9	4645.4	4634.3
10°	4606.7	4606.7	4601.2	4573.5	4568.0
12.5°	4518.2	4512.7	4490.5	4451.8	4440.8
15°	4396.5	4396.5	4352.3	4308.1	4291.5
17.5°	4263.8	4258.3	4203.0	4158.7	4136.6
20°	4120.0	4109.0	4053.7	3981.8	3943.1
22.5°	3959.6	3959.6	3893.3	3799.3	3760.6
25°	3810.3	3788.2	3727.4	3594.7	3495.1
27.5°	3638.9	3605.7	3539.3	3351.3	3235.2
30°	3450.9	3434.3	3340.3	3096.9	3008.4
32.5°	3273.9	3246.2	3146.7	2892.3	2820.4
35°	3091.4	3069.3	2920.0	2698.8	2632.4
37.5°	2908.9	2881.3	2693.2	2516.3	2433.3
40°	2726.4	2693.2	2488.6	2328.2	2239.7
42.5°	2555.0	2510.7	2311.6	2140.2	2040.7
45°	2372.5	2322.7	2123.6	1946.6	1869.2
47.5°	2190.0	2145.7	1963.2	1780.7	1692.3
50°	1996.4	1957.7	1791.8	1609.3	1515.3
52.5°	1836.0	1775.2	1614.8	1432.3	1354.9
55°	1648.0	1598.2	1448.9	1277.5	1211.1
57.5°	1476.6	1426.8	1288.5	1128.2	1072.9
60°	1316.2	1244.3	1128.2	989.9	945.7
62.5°	1139.2	1083.9	984.4	868.2	923.5
65°	978.9	923.5	835.1	851.7	707.9
67.5°	801.9	774.2	696.8	619.4	597.3
70°	652.6	619.4	591.7	508.8	486.7
72.5°	519.8	486.7	447.9	403.7	387.1
75°	392.6	365.0	342.9	326.3	359.5
77.5°	271.0	259.9	243.3	226.7	221.2
80°	177.0	171.4	165.9	160.4	154.8
82.5°	105.1	105.1	105.1	105.1	105.1
85°	55.3	60.8	66.4	71.9	77.4
87.5°	33.2	33.2	38.7	44.2	49.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)