

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: P563607

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563607
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-50-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10486.0 lumens
Efficiency: N/A
Efficacy: 105.0 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

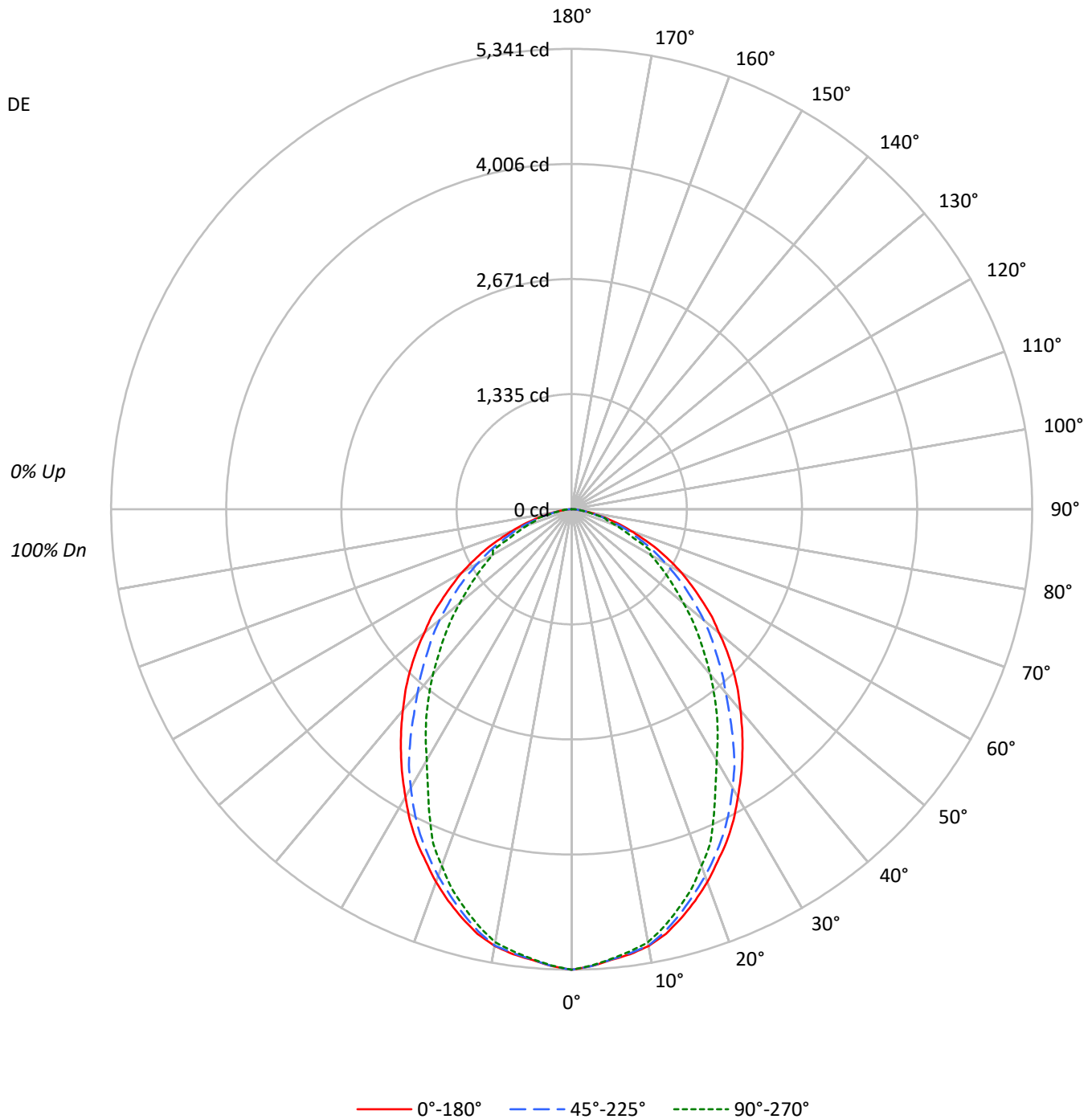
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7187	7187	7187
5°	7089	7081	7073
10°	7028	7019	6969
15°	6838	6769	6675
20°	6587	6481	6304
25°	6316	6179	5794
30°	5986	5795	5219
35°	5670	5355	4828
40°	5347	4881	4393
45°	5041	4512	3972
50°	4666	4188	3542
55°	4317	3795	3172
60°	3955	3390	2841
65°	3480	2968	2516
70°	2867	2599	2138
75°	2279	1991	2087
80°	1531	1436	1340
85°	954	1144	1335

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5041 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	497.2	4.7
10°-20°	1364.6	13.0
20°-30°	1889.1	18.0
30°-40°	2014.4	19.2
40°-50°	1837.7	17.5
50°-60°	1439.7	13.7
60°-70°	938.3	8.9
70°-80°	415.7	4.0
80°-90°	89.3	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°	3750.9	35.8
0°-40°	5765.3	55.0
0°-60°	9042.7	86.2
0°-90°	10486.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10486.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5341	5341	5341	5341	5341	
5°	5249	5243	5243	5236	5236	498
15°	4909	4909	4860	4810	4792	1380
25°	4255	4230	4162	4014	3903	1953
35°	3452	3427	3260	3013	2939	2158
45°	2649	2594	2371	2174	2087	2041
55°	1840	1785	1618	1426	1352	1650
65°	1093	1031	932	951	790	1077
75°	438	408	383	364	401	470
85°	62	68	74	80	86	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5341.4	5341.4	5341.4	5341.4	5341.4
2.5°	5304.4	5304.4	5304.4	5298.2	5298.2
5°	5248.8	5242.6	5242.6	5236.5	5236.5
7.5°	5205.6	5199.4	5193.2	5187.1	5174.7
10°	5143.8	5143.8	5137.7	5106.8	5100.6
12.5°	5045.0	5038.9	5014.2	4970.9	4958.6
15°	4909.2	4909.2	4859.8	4810.4	4791.8
17.5°	4761.0	4754.8	4693.0	4643.6	4618.9
20°	4600.4	4588.1	4526.3	4446.0	4402.8
22.5°	4421.3	4421.3	4347.2	4242.3	4199.0
25°	4254.6	4229.9	4162.0	4013.8	3902.6
27.5°	4063.2	4026.1	3952.0	3742.1	3612.4
30°	3853.2	3834.7	3729.7	3458.0	3359.2
32.5°	3655.6	3624.8	3513.6	3229.6	3149.3
35°	3451.9	3427.2	3260.4	3013.4	2939.3
37.5°	3248.1	3217.2	3007.3	2809.7	2717.0
40°	3044.3	3007.3	2778.8	2599.7	2500.9
42.5°	2852.9	2803.5	2581.2	2389.7	2278.6
45°	2649.1	2593.5	2371.2	2173.6	2087.2
47.5°	2445.3	2395.9	2192.1	1988.4	1889.6
50°	2229.2	2186.0	2000.7	1796.9	1692.0
52.5°	2050.1	1982.2	1803.1	1599.3	1512.9
55°	1840.2	1784.6	1617.9	1426.4	1352.3
57.5°	1648.7	1593.2	1438.8	1259.7	1198.0
60°	1469.7	1389.4	1259.7	1105.3	1055.9
62.5°	1272.1	1210.3	1099.2	969.5	1031.2
65°	1093.0	1031.2	932.4	951.0	790.4
67.5°	895.4	864.5	778.1	691.6	666.9
70°	728.7	691.6	660.7	568.1	543.4
72.5°	580.5	543.4	500.2	450.8	432.3
75°	438.4	407.6	382.9	364.3	401.4
77.5°	302.6	290.2	271.7	253.2	247.0
80°	197.6	191.4	185.3	179.1	172.9
82.5°	117.3	117.3	117.3	117.3	117.3
85°	61.8	67.9	74.1	80.3	86.5
87.5°	37.1	37.1	43.2	49.4	55.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)