

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: P563601

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563601
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-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11183.0 lumens
Efficiency: N/A
Efficacy: 111.9 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

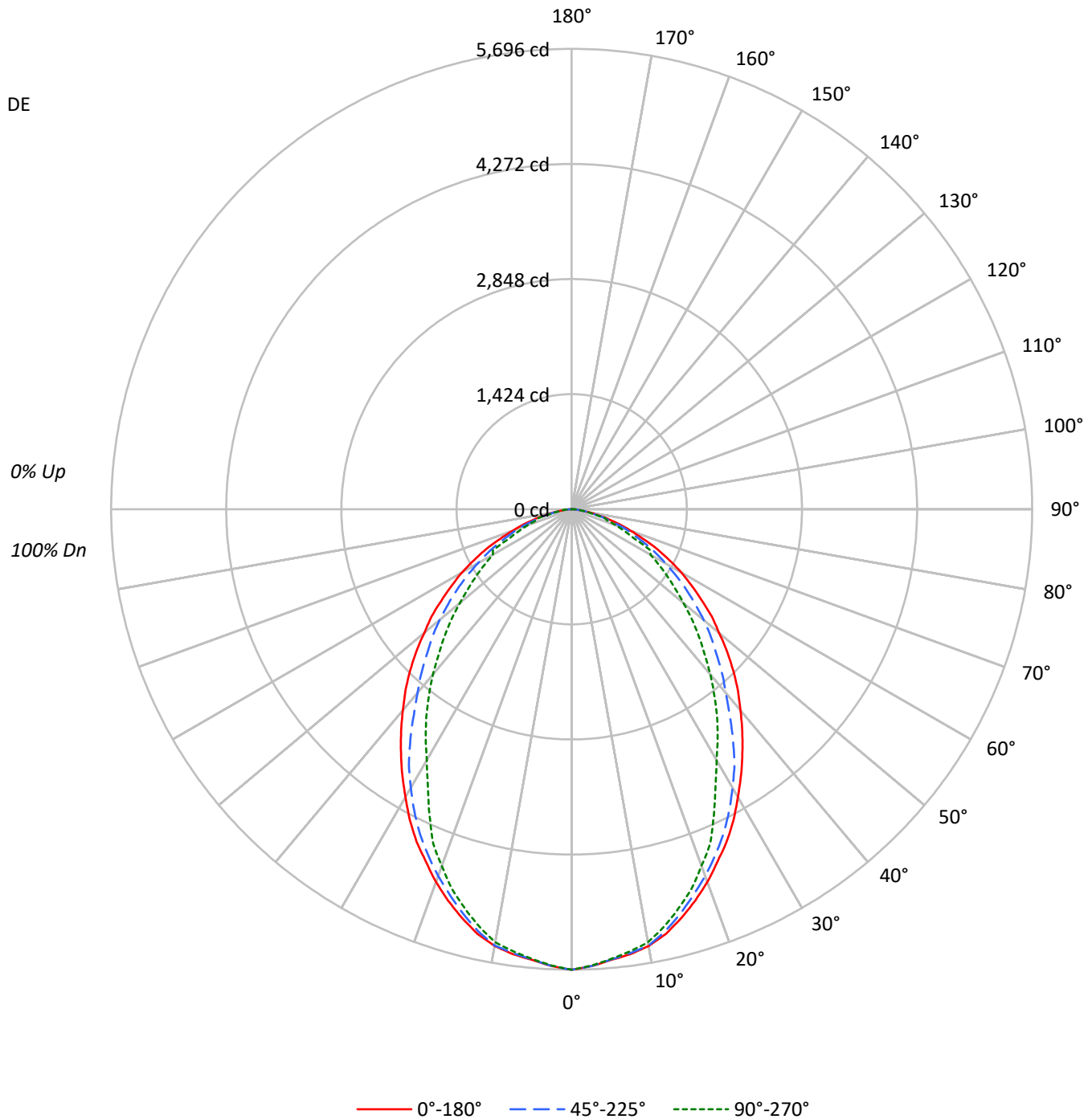
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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												87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75												75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65												65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56												56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50												50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44												44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40												40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36												36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33												33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30												30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7665	7665	7665
5°	7560	7552	7543
10°	7495	7486	7432
15°	7293	7219	7119
20°	7025	6912	6723
25°	6736	6589	6179
30°	6385	6180	5566
35°	6047	5711	5149
40°	5703	5205	4685
45°	5376	4812	4235
50°	4976	4466	3777
55°	4604	4047	3383
60°	4218	3615	3030
65°	3711	3166	2684
70°	3057	2772	2280
75°	2431	2123	2226
80°	1633	1531	1429
85°	1017	1220	1423

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5376 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	530.3	4.7
10°-20°	1455.3	13.0
20°-30°	2014.7	18.0
30°-40°	2148.3	19.2
40°-50°	1959.9	17.5
50°-60°	1535.4	13.7
60°-70°	1000.7	8.9
70°-80°	443.3	4.0
80°-90°	95.2	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°	4000.2	35.8
0°-40°	6148.5	55.0
0°-60°	9643.8	86.2
0°-90°	11183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11183.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5696	5696	5696	5696	5696	
5°	5598	5591	5591	5584	5584	531
15°	5236	5236	5183	5130	5110	1472
25°	4537	4511	4439	4281	4162	2083
35°	3681	3655	3477	3214	3135	2301
45°	2825	2766	2529	2318	2226	2176
55°	1962	1903	1725	1521	1442	1760
65°	1166	1100	994	1014	843	1149
75°	468	435	408	388	428	501
85°	66	72	79	86	92	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5696.5	5696.5	5696.5	5696.5	5696.5
2.5°	5657.0	5657.0	5657.0	5650.4	5650.4
5°	5597.7	5591.1	5591.1	5584.5	5584.5
7.5°	5551.6	5545.0	5538.4	5531.8	5518.7
10°	5485.7	5485.7	5479.1	5446.2	5439.6
12.5°	5380.4	5373.8	5347.4	5301.3	5288.2
15°	5235.5	5235.5	5182.8	5130.1	5110.4
17.5°	5077.4	5070.8	5005.0	4952.3	4926.0
20°	4906.2	4893.0	4827.2	4741.6	4695.5
22.5°	4715.2	4715.2	4636.2	4524.2	4478.2
25°	4537.4	4511.1	4438.6	4280.6	4162.0
27.5°	4333.3	4293.8	4214.7	3990.8	3852.5
30°	4109.4	4089.6	3977.7	3687.9	3582.5
32.5°	3898.6	3865.7	3747.2	3444.2	3358.6
35°	3681.3	3655.0	3477.2	3213.7	3134.7
37.5°	3464.0	3431.1	3207.1	2996.4	2897.6
40°	3246.7	3207.1	2963.5	2772.5	2667.1
42.5°	3042.5	2989.8	2752.7	2548.6	2430.1
45°	2825.2	2765.9	2528.8	2318.1	2225.9
47.5°	2607.9	2555.2	2337.9	2120.5	2015.2
50°	2377.4	2331.3	2133.7	1916.4	1804.4
52.5°	2186.4	2114.0	1923.0	1705.6	1613.5
55°	1962.5	1903.2	1725.4	1521.3	1442.2
57.5°	1758.3	1699.1	1534.4	1343.4	1277.6
60°	1567.4	1481.7	1343.4	1178.8	1126.1
62.5°	1356.6	1290.8	1172.2	1033.9	1099.8
65°	1165.6	1099.8	994.4	1014.2	842.9
67.5°	954.9	922.0	829.8	737.6	711.2
70°	777.1	737.6	704.7	605.9	579.5
72.5°	619.0	579.5	533.4	480.7	461.0
75°	467.6	434.6	408.3	388.5	428.1
77.5°	322.7	309.5	289.8	270.0	263.4
80°	210.7	204.2	197.6	191.0	184.4
82.5°	125.1	125.1	125.1	125.1	125.1
85°	65.9	72.4	79.0	85.6	92.2
87.5°	39.5	39.5	46.1	52.7	59.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)