

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: P563605

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563605
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-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10837.0 lumens
Efficiency: N/A
Efficacy: 108.5 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

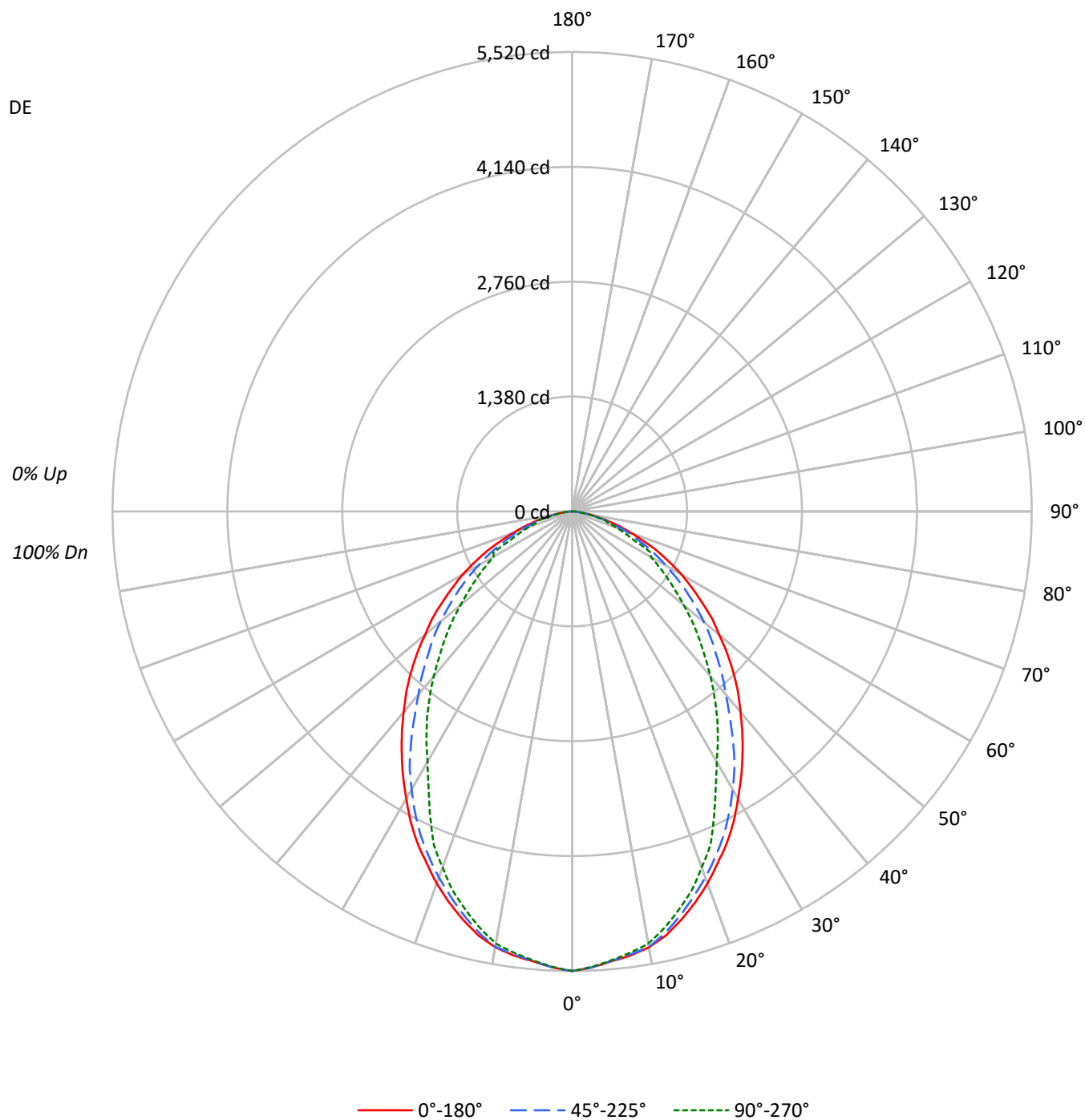
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	7427	7427	7427
5°	7326	7318	7309
10°	7263	7254	7202
15°	7067	6996	6898
20°	6808	6698	6515
25°	6528	6386	5988
30°	6187	5989	5394
35°	5860	5535	4990
40°	5526	5044	4540
45°	5210	4663	4104
50°	4822	4328	3660
55°	4461	3922	3278
60°	4087	3503	2937
65°	3596	3068	2601
70°	2962	2686	2209
75°	2355	2057	2156
80°	1582	1484	1385
85°	985	1183	1379

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5210 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	513.9	4.7
10°-20°	1410.2	13.0
20°-30°	1952.4	18.0
30°-40°	2081.8	19.2
40°-50°	1899.2	17.5
50°-60°	1487.9	13.7
60°-70°	969.7	8.9
70°-80°	429.6	4.0
80°-90°	92.3	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°	3876.5	35.8
0°-40°	5958.3	55.0
0°-60°	9345.4	86.2
0°-90°	10837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10837.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5520	5520	5520	5520	5520	
5°	5424	5418	5418	5412	5412	515
15°	5074	5074	5022	4971	4952	1426
25°	4397	4372	4301	4148	4033	2019
35°	3567	3542	3370	3114	3038	2230
45°	2738	2680	2451	2246	2157	2109
55°	1902	1844	1672	1474	1398	1706
65°	1130	1066	964	983	817	1113
75°	453	421	396	376	415	486
85°	64	70	77	83	89	89
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5520.2	5520.2	5520.2	5520.2	5520.2
2.5°	5481.9	5481.9	5481.9	5475.6	5475.6
5°	5424.5	5418.1	5418.1	5411.7	5411.7
7.5°	5379.8	5373.4	5367.1	5360.7	5347.9
10°	5316.0	5316.0	5309.6	5277.7	5271.3
12.5°	5213.9	5207.5	5182.0	5137.3	5124.6
15°	5073.5	5073.5	5022.4	4971.4	4952.2
17.5°	4920.3	4914.0	4850.1	4799.1	4773.6
20°	4754.4	4741.6	4677.8	4594.9	4550.2
22.5°	4569.3	4569.3	4492.8	4384.3	4339.6
25°	4397.0	4371.5	4301.3	4148.1	4033.3
27.5°	4199.2	4160.9	4084.3	3867.3	3733.3
30°	3982.2	3963.1	3854.6	3573.8	3471.7
32.5°	3778.0	3746.1	3631.2	3337.7	3254.7
35°	3567.4	3541.9	3369.6	3114.3	3037.7
37.5°	3356.8	3324.9	3107.9	2903.7	2808.0
40°	3146.2	3107.9	2871.8	2686.7	2584.6
42.5°	2948.4	2897.3	2667.6	2469.7	2354.9
45°	2737.8	2680.3	2450.6	2246.4	2157.0
47.5°	2527.2	2476.1	2265.5	2054.9	1952.8
50°	2303.8	2259.1	2067.7	1857.1	1748.6
52.5°	2118.7	2048.5	1863.5	1652.9	1563.5
55°	1901.8	1844.3	1672.0	1474.2	1397.6
57.5°	1703.9	1646.5	1487.0	1301.9	1238.1
60°	1518.9	1435.9	1301.9	1142.3	1091.3
62.5°	1314.6	1250.8	1136.0	1001.9	1065.8
65°	1129.6	1065.8	963.6	982.8	816.9
67.5°	925.4	893.4	804.1	714.8	689.2
70°	753.0	714.8	682.8	587.1	561.6
72.5°	599.9	561.6	516.9	465.9	446.7
75°	453.1	421.2	395.7	376.5	414.8
77.5°	312.7	299.9	280.8	261.7	255.3
80°	204.2	197.8	191.5	185.1	178.7
82.5°	121.3	121.3	121.3	121.3	121.3
85°	63.8	70.2	76.6	83.0	89.3
87.5°	38.3	38.3	44.7	51.1	57.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)