

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: P563536

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563536
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-40-UNV-82-84-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9240.0 lumens
Efficiency: N/A
Efficacy: 92.5 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

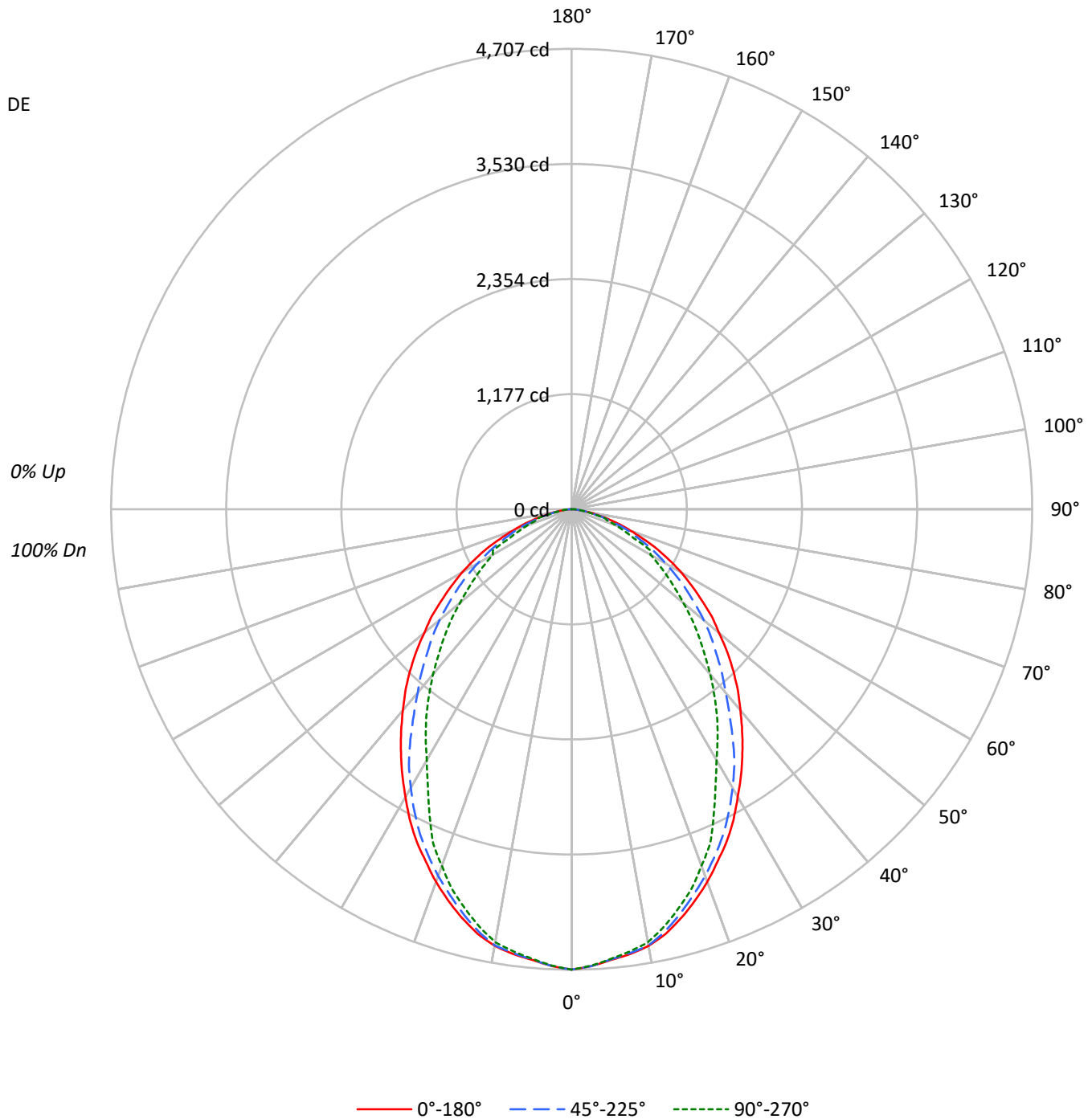
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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°	6333	6333	6333
5°	6247	6240	6232
10°	6193	6185	6141
15°	6026	5965	5882
20°	5804	5711	5555
25°	5566	5445	5105
30°	5275	5106	4599
35°	4996	4719	4254
40°	4712	4301	3871
45°	4442	3976	3500
50°	4112	3690	3121
55°	3804	3344	2795
60°	3485	2987	2504
65°	3066	2616	2217
70°	2526	2290	1884
75°	2008	1754	1839
80°	1349	1265	1181
85°	840	1008	1176

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4442 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	438.1	4.7
10°-20°	1202.4	13.0
20°-30°	1664.7	18.0
30°-40°	1775.0	19.2
40°-50°	1619.3	17.5
50°-60°	1268.6	13.7
60°-70°	826.8	8.9
70°-80°	366.3	4.0
80°-90°	78.6	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°	3305.2	35.8
0°-40°	5080.2	55.0
0°-60°	7968.2	86.2
0°-90°	9240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9240.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4707	4707	4707	4707	4707	
5°	4625	4620	4620	4614	4614	439
15°	4326	4326	4282	4239	4222	1216
25°	3749	3727	3667	3537	3439	1721
35°	3042	3020	2873	2655	2590	1902
45°	2334	2285	2090	1915	1839	1798
55°	1622	1572	1426	1257	1192	1454
65°	963	909	822	838	696	949
75°	386	359	337	321	354	414
85°	54	60	65	71	76	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4706.7	4706.7	4706.7	4706.7	4706.7
2.5°	4674.1	4674.1	4674.1	4668.6	4668.6
5°	4625.1	4619.7	4619.7	4614.2	4614.2
7.5°	4587.0	4581.6	4576.1	4570.7	4559.8
10°	4532.6	4532.6	4527.2	4500.0	4494.5
12.5°	4445.5	4440.1	4418.3	4380.3	4369.4
15°	4325.8	4325.8	4282.3	4238.8	4222.5
17.5°	4195.2	4189.8	4135.4	4091.9	4070.1
20°	4053.8	4042.9	3988.5	3917.7	3879.7
22.5°	3896.0	3896.0	3830.7	3738.2	3700.1
25°	3749.1	3727.3	3667.4	3536.9	3438.9
27.5°	3580.4	3547.7	3482.4	3297.4	3183.2
30°	3395.4	3379.1	3286.6	3047.1	2960.1
32.5°	3221.3	3194.0	3096.1	2845.8	2775.1
35°	3041.7	3019.9	2873.0	2655.4	2590.1
37.5°	2862.1	2834.9	2649.9	2475.8	2394.2
40°	2682.6	2649.9	2448.6	2290.8	2203.7
42.5°	2513.9	2470.4	2274.5	2105.8	2007.8
45°	2334.3	2285.3	2089.5	1915.3	1839.2
47.5°	2154.8	2111.2	1931.7	1752.1	1665.0
50°	1964.3	1926.2	1763.0	1583.4	1490.9
52.5°	1806.5	1746.7	1588.9	1409.3	1333.1
55°	1621.5	1572.5	1425.6	1256.9	1191.6
57.5°	1452.8	1403.9	1267.8	1110.0	1055.6
60°	1295.0	1224.3	1110.0	974.0	930.5
62.5°	1120.9	1066.5	968.6	854.3	908.7
65°	963.1	908.7	821.6	838.0	696.5
67.5°	789.0	761.8	685.6	609.4	587.7
70°	642.1	609.4	582.2	500.6	478.8
72.5°	511.5	478.8	440.7	397.2	380.9
75°	386.3	359.1	337.4	321.0	353.7
77.5°	266.6	255.7	239.4	223.1	217.7
80°	174.1	168.7	163.2	157.8	152.4
82.5°	103.4	103.4	103.4	103.4	103.4
85°	54.4	59.9	65.3	70.7	76.2
87.5°	32.6	32.6	38.1	43.5	49.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)