

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: P563537

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563537
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
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10996.0 lumens
Efficiency: N/A
Efficacy: 110.1 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

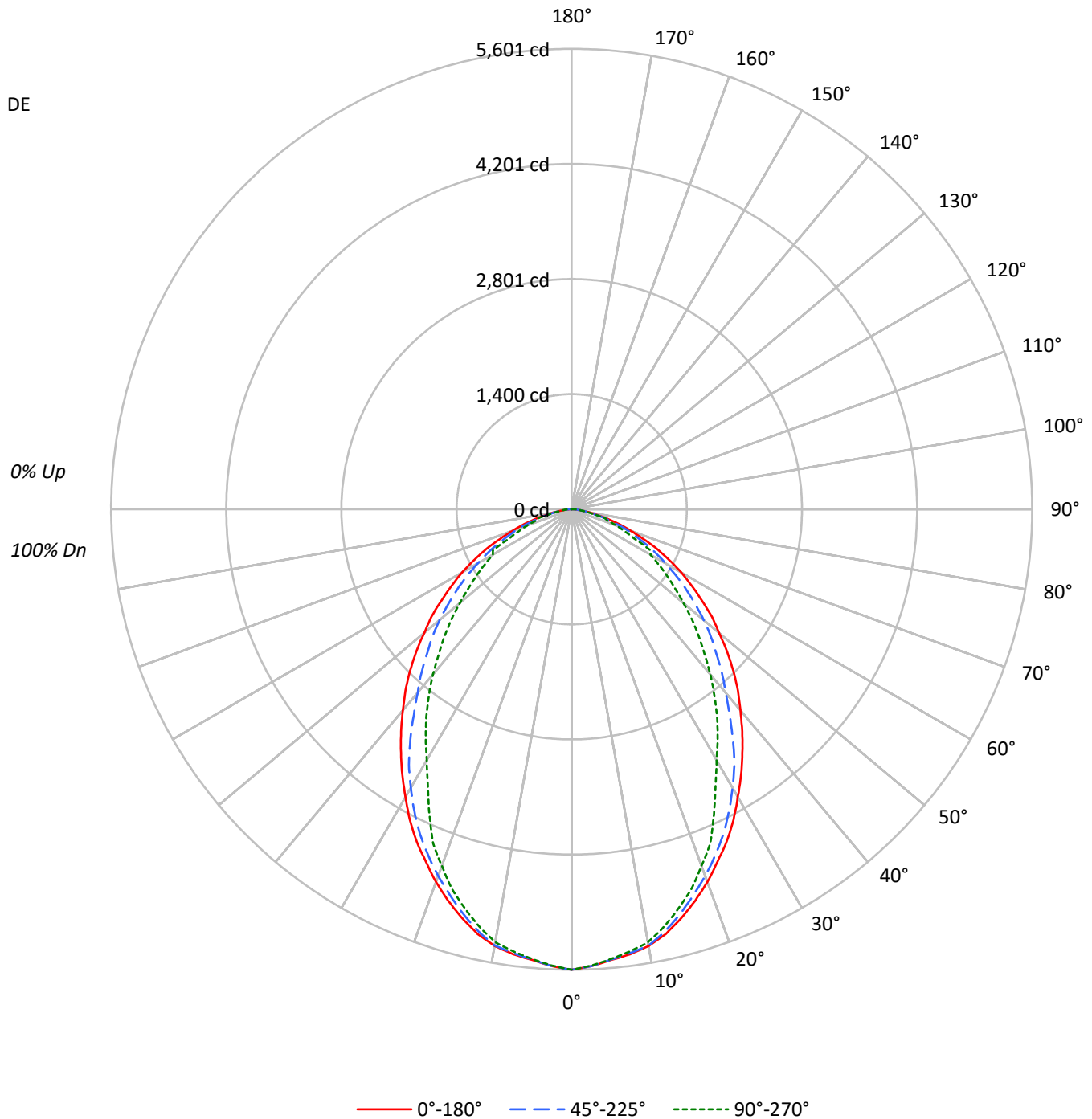
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7536	7536	7536
5°	7434	7425	7416
10°	7370	7361	7308
15°	7171	7099	6999
20°	6907	6796	6611
25°	6623	6479	6076
30°	6278	6076	5473
35°	5945	5616	5063
40°	5607	5118	4606
45°	5286	4732	4165
50°	4893	4392	3714
55°	4527	3980	3327
60°	4147	3555	2980
65°	3649	3113	2639
70°	3006	2726	2242
75°	2390	2087	2188
80°	1605	1506	1405
85°	1000	1200	1400

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5286 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	521.4	4.7
10°-20°	1430.9	13.0
20°-30°	1981.0	18.0
30°-40°	2112.4	19.2
40°-50°	1927.1	17.5
50°-60°	1509.7	13.7
60°-70°	984.0	8.9
70°-80°	435.9	4.0
80°-90°	93.6	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°	3933.4	35.8
0°-40°	6045.7	55.0
0°-60°	9482.5	86.2
0°-90°	10996.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10996.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5601	5601	5601	5601	5601	
5°	5504	5498	5498	5491	5491	522
15°	5148	5148	5096	5044	5025	1447
25°	4462	4436	4364	4209	4092	2048
35°	3620	3594	3419	3160	3082	2263
45°	2778	2720	2487	2279	2189	2140
55°	1930	1871	1697	1496	1418	1731
65°	1146	1081	978	997	829	1129
75°	460	427	402	382	421	493
85°	65	71	78	84	91	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5601.2	5601.2	5601.2	5601.2	5601.2
2.5°	5562.4	5562.4	5562.4	5555.9	5555.9
5°	5504.1	5497.6	5497.6	5491.1	5491.1
7.5°	5458.8	5452.3	5445.8	5439.3	5426.4
10°	5394.0	5394.0	5387.5	5355.2	5348.7
12.5°	5290.4	5283.9	5258.0	5212.7	5199.7
15°	5147.9	5147.9	5096.1	5044.3	5024.9
17.5°	4992.5	4986.1	4921.3	4869.5	4843.6
20°	4824.2	4811.2	4746.5	4662.3	4617.0
22.5°	4636.4	4636.4	4558.7	4448.6	4403.3
25°	4461.5	4435.6	4364.4	4209.0	4092.4
27.5°	4260.8	4222.0	4144.3	3924.1	3788.1
30°	4040.6	4021.2	3911.1	3626.2	3522.6
32.5°	3833.4	3801.1	3684.5	3386.6	3302.5
35°	3619.7	3593.8	3419.0	3160.0	3082.3
37.5°	3406.1	3373.7	3153.5	2946.3	2849.2
40°	3192.4	3153.5	2913.9	2726.1	2622.5
42.5°	2991.6	2939.8	2706.7	2506.0	2389.4
45°	2777.9	2719.7	2486.6	2279.3	2188.7
47.5°	2564.3	2512.5	2298.8	2085.1	1981.5
50°	2337.6	2292.3	2098.0	1884.3	1774.3
52.5°	2149.8	2078.6	1890.8	1677.1	1586.5
55°	1929.7	1871.4	1696.6	1495.8	1418.1
57.5°	1728.9	1670.7	1508.8	1321.0	1256.2
60°	1541.1	1457.0	1321.0	1159.1	1107.3
62.5°	1333.9	1269.2	1152.6	1016.6	1081.4
65°	1146.1	1081.4	977.8	997.2	828.9
67.5°	938.9	906.6	815.9	725.2	699.3
70°	764.1	725.2	692.9	595.7	569.8
72.5°	608.7	569.8	524.5	472.7	453.3
75°	459.8	427.4	401.5	382.0	420.9
77.5°	317.3	304.3	284.9	265.5	259.0
80°	207.2	200.7	194.3	187.8	181.3
82.5°	123.0	123.0	123.0	123.0	123.0
85°	64.8	71.2	77.7	84.2	90.7
87.5°	38.9	38.9	45.3	51.8	58.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)