

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: P563673

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563673
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-LD4-4HI-35-UNV-82-88-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15035.0 lumens
Efficiency: N/A
Efficacy: 87.0 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

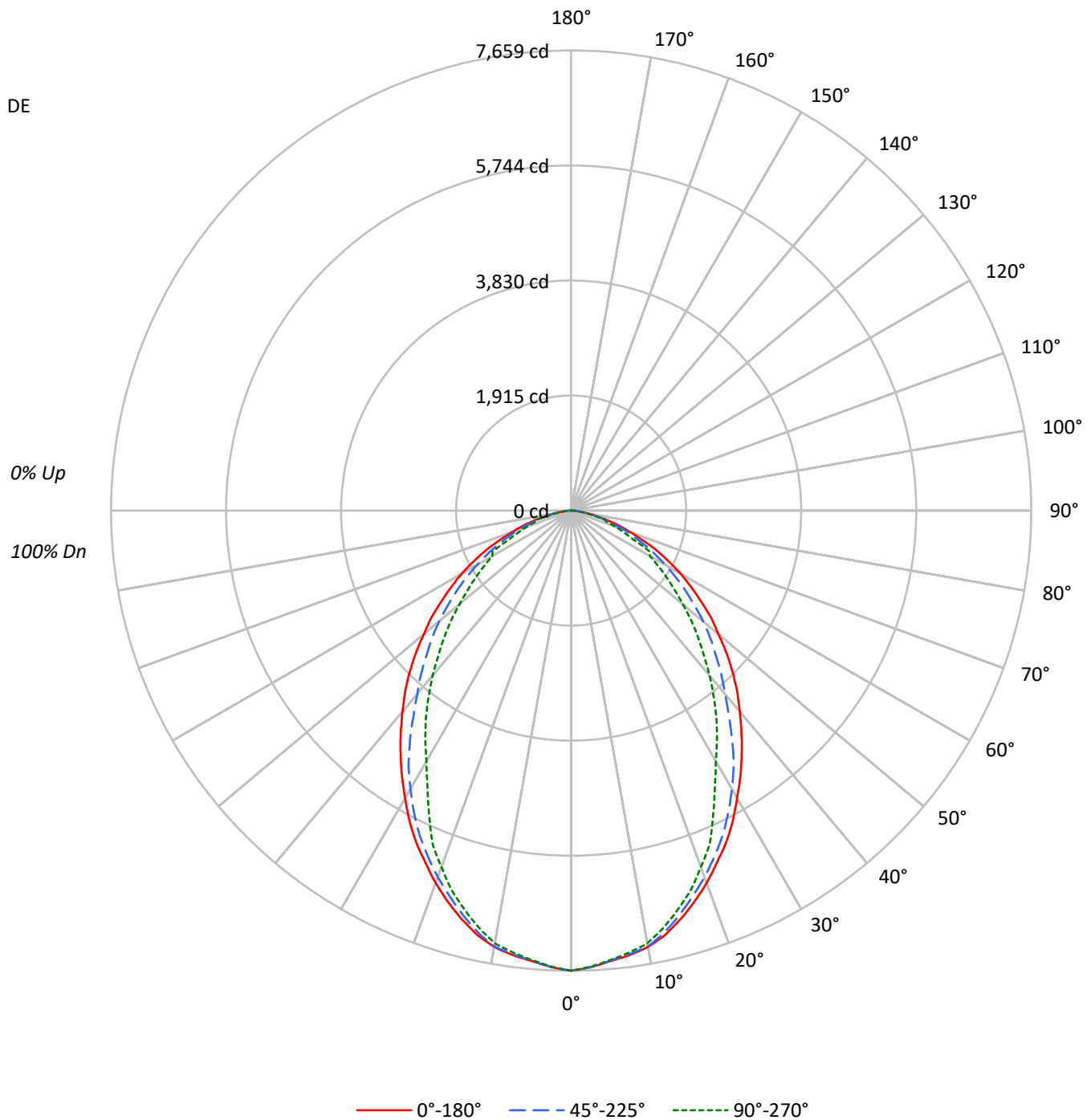
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10305	10305	10305
5°	10165	10153	10141
10°	10076	10064	9992
15°	9805	9706	9570
20°	9445	9292	9039
25°	9056	8859	8307
30°	8584	8309	7483
35°	8129	7679	6922
40°	7667	6998	6298
45°	7227	6469	5694
50°	6691	6005	5078
55°	6189	5442	4548
60°	5670	4860	4074
65°	4989	4256	3608
70°	4110	3727	3065
75°	3268	2853	2992
80°	2195	2058	1921
85°	1366	1639	1914

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7227 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	712.9	4.7
10°-20°	1956.5	13.0
20°-30°	2708.7	18.0
30°-40°	2888.3	19.2
40°-50°	2634.9	17.5
50°-60°	2064.3	13.7
60°-70°	1345.4	8.9
70°-80°	596.1	4.0
80°-90°	128.0	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°	5378.1	35.8
0°-40°	8266.4	55.0
0°-60°	12965.6	86.2
0°-90°	15035.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15035.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7659	7659	7659	7659	7659	
5°	7526	7517	7517	7508	7508	714
15°	7039	7039	6968	6897	6871	1979
25°	6100	6065	5968	5755	5596	2801
35°	4949	4914	4675	4321	4214	3094
45°	3798	3719	3400	3117	2993	2926
55°	2638	2559	2320	2045	1939	2367
65°	1567	1479	1337	1364	1133	1544
75°	629	584	549	522	576	674
85°	88	97	106	115	124	123
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7658.6	7658.6	7658.6	7658.6	7658.6
2.5°	7605.5	7605.5	7605.5	7596.7	7596.7
5°	7525.8	7517.0	7517.0	7508.1	7508.1
7.5°	7463.8	7455.0	7446.1	7437.3	7419.6
10°	7375.3	7375.3	7366.4	7322.2	7313.3
12.5°	7233.6	7224.8	7189.4	7127.4	7109.7
15°	7038.9	7038.9	6968.0	6897.2	6870.6
17.5°	6826.4	6817.5	6729.0	6658.1	6622.7
20°	6596.2	6578.5	6489.9	6374.8	6312.8
22.5°	6339.4	6339.4	6233.1	6082.6	6020.7
25°	6100.3	6064.9	5967.5	5755.0	5595.7
27.5°	5825.9	5772.7	5666.5	5365.5	5179.5
30°	5524.8	5498.3	5347.8	4958.2	4816.5
32.5°	5241.5	5197.2	5037.9	4630.6	4515.5
35°	4949.3	4913.9	4674.9	4320.7	4214.5
37.5°	4657.2	4612.9	4311.9	4028.5	3895.7
40°	4365.0	4311.9	3984.3	3727.5	3585.8
42.5°	4090.5	4019.7	3700.9	3426.5	3267.1
45°	3798.3	3718.6	3399.9	3116.6	2992.6
47.5°	3506.1	3435.3	3143.1	2851.0	2709.3
50°	3196.3	3134.3	2868.7	2576.5	2426.0
52.5°	2939.5	2842.1	2585.3	2293.2	2169.2
55°	2638.5	2558.8	2319.7	2045.3	1939.0
57.5°	2364.0	2284.3	2063.0	1806.2	1717.7
60°	2107.2	1992.1	1806.2	1584.8	1514.0
62.5°	1823.9	1735.4	1576.0	1390.1	1478.6
65°	1567.1	1478.6	1336.9	1363.5	1133.3
67.5°	1283.8	1239.5	1115.6	991.6	956.2
70°	1044.8	991.6	947.4	814.6	779.1
72.5°	832.3	779.1	717.2	646.3	619.8
75°	628.6	584.4	548.9	522.4	575.5
77.5°	433.8	416.1	389.6	363.0	354.2
80°	283.3	274.5	265.6	256.8	247.9
82.5°	168.2	168.2	168.2	168.2	168.2
85°	88.5	97.4	106.2	115.1	124.0
87.5°	53.1	53.1	62.0	70.8	79.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)