

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: P564055

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564055
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-LD4-4STD-35-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13612.0 lumens
Efficiency: N/A
Efficacy: 102.2 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

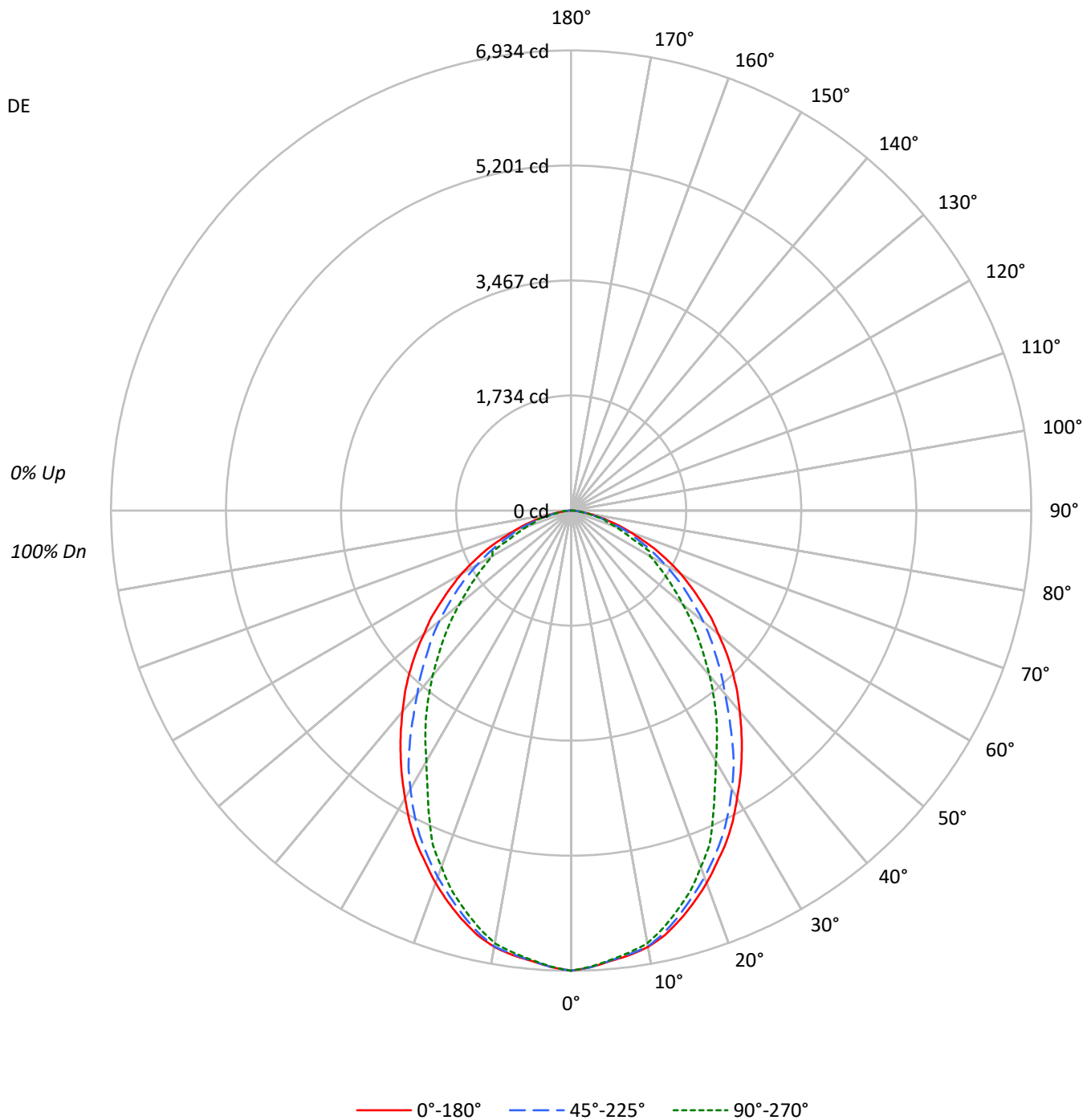
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9329	9329	9329
5°	9203	9192	9181
10°	9123	9112	9046
15°	8877	8787	8665
20°	8551	8413	8184
25°	8199	8021	7521
30°	7771	7522	6775
35°	7360	6952	6267
40°	6941	6336	5702
45°	6543	5857	5155
50°	6057	5436	4598
55°	5603	4927	4118
60°	5134	4400	3689
65°	4517	3854	3266
70°	3721	3374	2775
75°	2959	2584	2708
80°	1987	1863	1739
85°	1238	1485	1732

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6543 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	645.4	4.7
10°-20°	1771.4	13.0
20°-30°	2452.3	18.0
30°-40°	2614.9	19.2
40°-50°	2385.6	17.5
50°-60°	1868.9	13.7
60°-70°	1218.0	8.9
70°-80°	539.7	4.0
80°-90°	115.9	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°	4869.1	35.8
0°-40°	7484.0	55.0
0°-60°	11738.4	86.2
0°-90°	13612.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13612.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6934	6934	6934	6934	6934	
5°	6814	6806	6806	6798	6798	647
15°	6373	6373	6308	6244	6220	1792
25°	5523	5491	5403	5210	5066	2536
35°	4481	4449	4232	3912	3816	2801
45°	3439	3367	3078	2822	2709	2649
55°	2389	2317	2100	1852	1756	2143
65°	1419	1339	1210	1234	1026	1398
75°	569	529	497	473	521	610
85°	80	88	96	104	112	111
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6933.8	6933.8	6933.8	6933.8	6933.8
2.5°	6885.7	6885.7	6885.7	6877.7	6877.7
5°	6813.5	6805.5	6805.5	6797.5	6797.5
7.5°	6757.4	6749.4	6741.4	6733.4	6717.3
10°	6677.3	6677.3	6669.2	6629.2	6621.2
12.5°	6549.0	6541.0	6508.9	6452.8	6436.8
15°	6372.7	6372.7	6308.5	6244.4	6220.4
17.5°	6180.3	6172.3	6092.1	6028.0	5995.9
20°	5971.9	5955.8	5875.7	5771.5	5715.4
22.5°	5739.4	5739.4	5643.2	5506.9	5450.8
25°	5523.0	5490.9	5402.7	5210.3	5066.1
27.5°	5274.5	5226.4	5130.2	4857.6	4689.3
30°	5001.9	4977.9	4841.6	4488.9	4360.7
32.5°	4745.4	4705.3	4561.1	4192.3	4088.1
35°	4480.9	4448.8	4232.4	3911.8	3815.6
37.5°	4216.4	4176.3	3903.8	3647.2	3527.0
40°	3951.8	3903.8	3607.2	3374.7	3246.4
42.5°	3703.4	3639.2	3350.7	3102.2	2957.9
45°	3438.8	3366.7	3078.1	2821.6	2709.4
47.5°	3174.3	3110.2	2845.7	2581.1	2452.9
50°	2893.7	2837.6	2597.2	2332.6	2196.4
52.5°	2661.3	2573.1	2340.6	2076.1	1963.9
55°	2388.7	2316.6	2100.2	1851.7	1755.5
57.5°	2140.3	2068.1	1867.7	1635.2	1555.1
60°	1907.8	1803.6	1635.2	1434.8	1370.7
62.5°	1651.3	1571.1	1426.8	1258.5	1338.7
65°	1418.8	1338.7	1210.4	1234.5	1026.0
67.5°	1162.3	1122.2	1010.0	897.8	865.7
70°	945.9	897.8	857.7	737.5	705.4
72.5°	753.5	705.4	649.3	585.2	561.1
75°	569.1	529.1	497.0	472.9	521.0
77.5°	392.8	376.7	352.7	328.7	320.6
80°	256.5	248.5	240.5	232.5	224.4
82.5°	152.3	152.3	152.3	152.3	152.3
85°	80.2	88.2	96.2	104.2	112.2
87.5°	48.1	48.1	56.1	64.1	72.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)