

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: P563717

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563717
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-40-UNV-81-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17803.0 lumens
Efficiency: N/A
Efficacy: 103.0 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

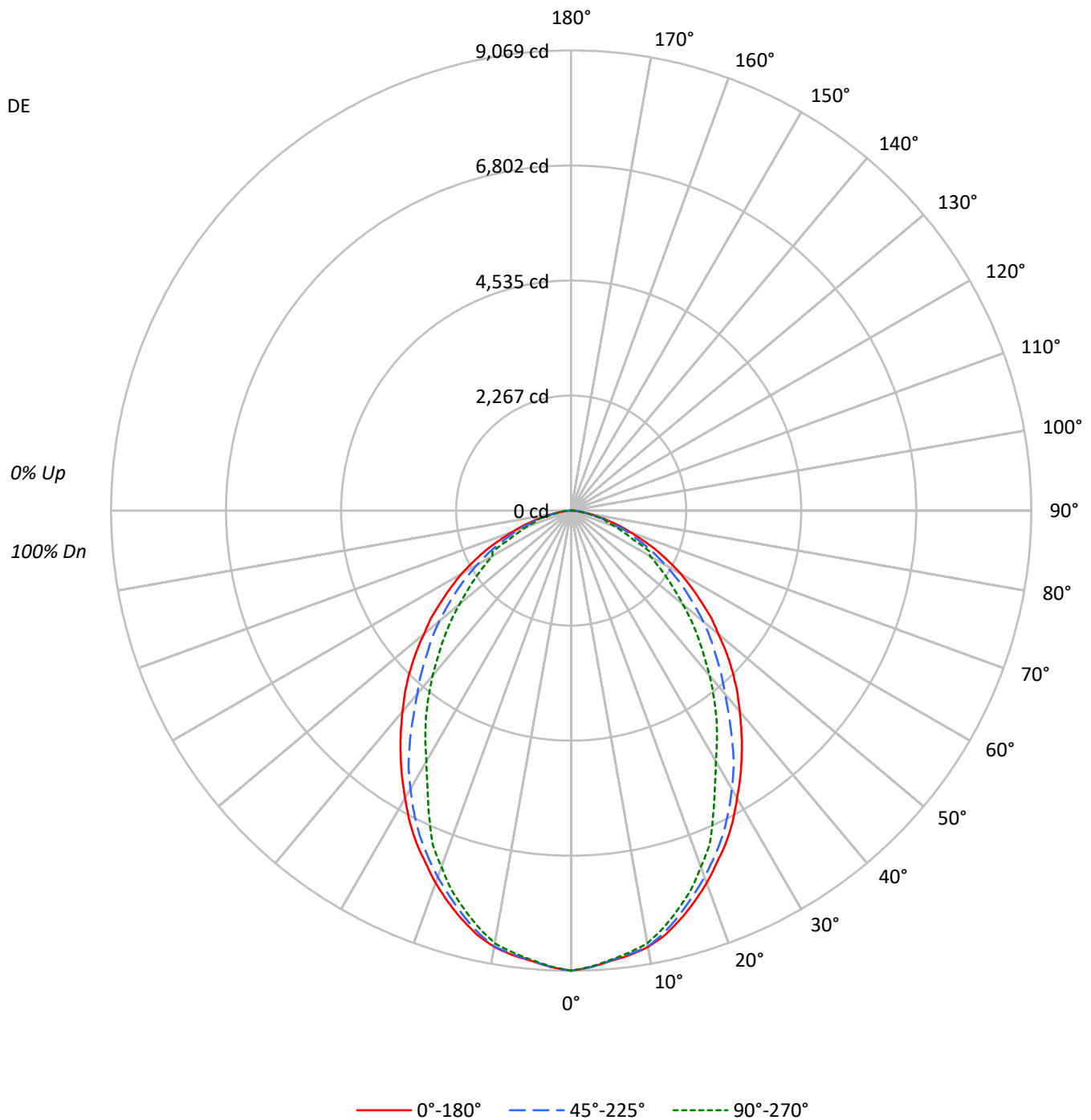
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	12202	12202	12202
5°	12036	12022	12008
10°	11932	11917	11831
15°	11610	11493	11332
20°	11183	11003	10703
25°	10724	10490	9837
30°	10164	9838	8861
35°	9626	9092	8197
40°	9078	8286	7458
45°	8558	7660	6743
50°	7922	7110	6013
55°	7329	6443	5386
60°	6715	5755	4824
65°	5908	5040	4272
70°	4867	4413	3629
75°	3870	3379	3543
80°	2600	2437	2275
85°	1618	1942	2266

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8558 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	844.2	4.7
10°-20°	2316.7	13.0
20°-30°	3207.4	18.0
30°-40°	3420.0	19.2
40°-50°	3120.0	17.5
50°-60°	2444.3	13.7
60°-70°	1593.1	8.9
70°-80°	705.8	4.0
80°-90°	151.5	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°	6368.3	35.8
0°-40°	9788.3	55.0
0°-60°	15352.6	86.2
0°-90°	17803.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17803.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9069	9069	9069	9069	9069	
5°	8911	8901	8901	8890	8890	846
15°	8335	8335	8251	8167	8136	2343
25°	7223	7182	7066	6815	6626	3316
35°	5860	5819	5536	5116	4990	3664
45°	4498	4403	4026	3690	3544	3464
55°	3124	3030	2747	2422	2296	2802
65°	1856	1751	1583	1614	1342	1829
75°	744	692	650	619	682	798
85°	105	115	126	136	147	145
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9068.6	9068.6	9068.6	9068.6	9068.6
2.5°	9005.7	9005.7	9005.7	8995.2	8995.2
5°	8911.4	8900.9	8900.9	8890.4	8890.4
7.5°	8838.0	8827.5	8817.0	8806.5	8785.5
10°	8733.1	8733.1	8722.6	8670.2	8659.7
12.5°	8565.4	8554.9	8513.0	8439.6	8418.6
15°	8334.7	8334.7	8250.9	8167.0	8135.5
17.5°	8083.1	8072.6	7967.8	7883.9	7842.0
20°	7810.5	7789.6	7684.7	7548.4	7475.1
22.5°	7506.5	7506.5	7380.7	7202.5	7129.1
25°	7223.4	7181.5	7066.2	6814.6	6625.9
27.5°	6898.4	6835.5	6709.7	6353.3	6133.1
30°	6542.0	6510.5	6332.3	5871.0	5703.3
32.5°	6206.5	6154.1	5965.4	5483.1	5346.8
35°	5860.5	5818.6	5535.5	5116.2	4990.4
37.5°	5514.6	5462.1	5105.7	4770.2	4612.9
40°	5168.6	5105.7	4717.8	4413.7	4246.0
42.5°	4843.6	4759.7	4382.3	4057.3	3868.6
45°	4497.6	4403.3	4025.8	3690.3	3543.6
47.5°	4151.6	4067.8	3721.8	3375.8	3208.1
50°	3784.7	3711.3	3396.8	3050.8	2872.6
52.5°	3480.7	3365.3	3061.3	2715.3	2568.6
55°	3124.2	3029.9	2746.8	2421.8	2296.0
57.5°	2799.2	2704.9	2442.8	2138.7	2033.9
60°	2495.2	2358.9	2138.7	1876.6	1792.8
62.5°	2159.7	2054.9	1866.1	1646.0	1750.8
65°	1855.7	1750.8	1583.1	1614.5	1341.9
67.5°	1520.2	1467.8	1321.0	1174.2	1132.3
70°	1237.1	1174.2	1121.8	964.5	922.6
72.5°	985.5	922.6	849.2	765.3	733.9
75°	744.4	691.9	650.0	618.6	681.5
77.5°	513.7	492.7	461.3	429.8	419.4
80°	335.5	325.0	314.5	304.0	293.6
82.5°	199.2	199.2	199.2	199.2	199.2
85°	104.8	115.3	125.8	136.3	146.8
87.5°	62.9	62.9	73.4	83.9	94.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)