

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: P562496

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562496
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-LD4-2HI-35-UNV-81-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7610.0 lumens
Efficiency: N/A
Efficacy: 88.1 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

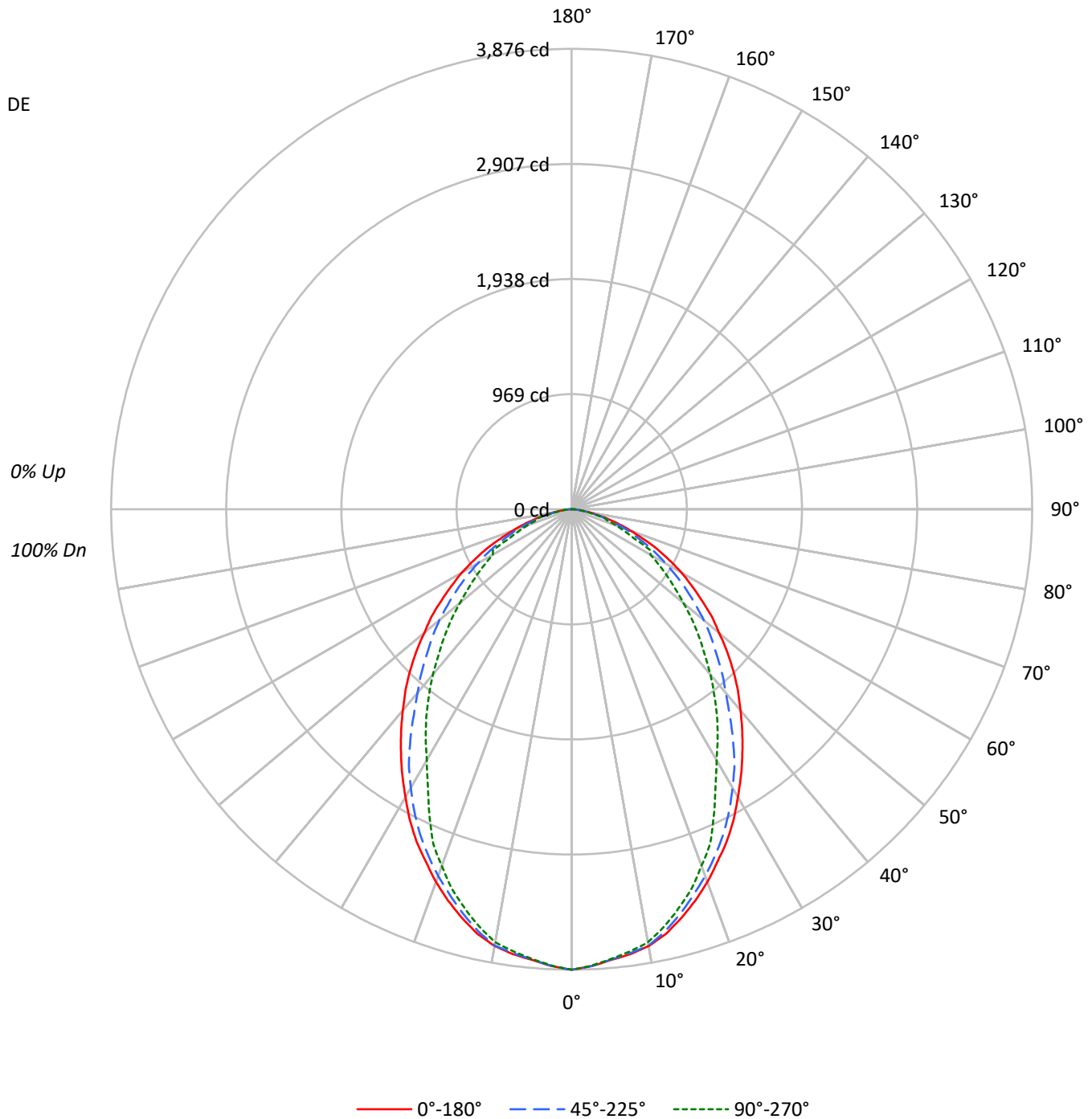
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5216	5216	5216
5°	5145	5139	5133
10°	5100	5094	5057
15°	4963	4913	4844
20°	4780	4703	4575
25°	4584	4484	4205
30°	4345	4205	3788
35°	4115	3887	3504
40°	3880	3542	3188
45°	3658	3275	2882
50°	3386	3039	2570
55°	3133	2754	2302
60°	2870	2460	2062
65°	2525	2154	1826
70°	2080	1886	1552
75°	1654	1444	1514
80°	1111	1041	972
85°	692	831	968

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3658 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	360.8	4.7
10°-20°	990.3	13.0
20°-30°	1371.0	18.0
30°-40°	1461.9	19.2
40°-50°	1333.7	17.5
50°-60°	1044.8	13.7
60°-70°	681.0	8.9
70°-80°	301.7	4.0
80°-90°	64.8	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°	2722.2	35.8
0°-40°	4184.0	55.0
0°-60°	6562.5	86.2
0°-90°	7610.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7610.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3876	3876	3876	3876	3876	
5°	3809	3805	3805	3800	3800	362
15°	3563	3563	3527	3491	3478	1002
25°	3088	3070	3020	2913	2832	1418
35°	2505	2487	2366	2187	2133	1566
45°	1922	1882	1721	1578	1515	1481
55°	1336	1295	1174	1035	981	1198
65°	793	748	677	690	574	782
75°	318	296	278	264	291	341
85°	45	49	54	58	63	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3876.4	3876.4	3876.4	3876.4	3876.4
2.5°	3849.5	3849.5	3849.5	3845.1	3845.1
5°	3809.2	3804.7	3804.7	3800.2	3800.2
7.5°	3777.8	3773.4	3768.9	3764.4	3755.4
10°	3733.0	3733.0	3728.5	3706.1	3701.7
12.5°	3661.3	3656.8	3638.9	3607.5	3598.6
15°	3562.7	3562.7	3526.9	3491.0	3477.6
17.5°	3455.2	3450.7	3405.9	3370.0	3352.1
20°	3338.7	3329.7	3284.9	3226.6	3195.3
22.5°	3208.7	3208.7	3154.9	3078.7	3047.4
25°	3087.7	3069.8	3020.5	2912.9	2832.3
27.5°	2948.8	2921.9	2868.1	2715.7	2621.6
30°	2796.4	2783.0	2706.8	2509.6	2437.9
32.5°	2653.0	2630.6	2549.9	2343.8	2285.5
35°	2505.1	2487.2	2366.2	2186.9	2133.2
37.5°	2357.2	2334.8	2182.5	2039.0	1971.8
40°	2209.3	2182.5	2016.6	1886.7	1815.0
42.5°	2070.4	2034.6	1873.2	1734.3	1653.6
45°	1922.5	1882.2	1720.9	1577.5	1514.7
47.5°	1774.6	1738.8	1590.9	1443.0	1371.3
50°	1617.8	1586.4	1452.0	1304.1	1227.9
52.5°	1487.8	1438.5	1308.6	1160.7	1097.9
55°	1335.5	1295.1	1174.1	1035.2	981.4
57.5°	1196.5	1156.2	1044.2	914.2	869.4
60°	1066.6	1008.3	914.2	802.2	766.3
62.5°	923.2	878.4	797.7	703.6	748.4
65°	793.2	748.4	676.7	690.1	573.6
67.5°	649.8	627.4	564.7	501.9	484.0
70°	528.8	501.9	479.5	412.3	394.4
72.5°	421.3	394.4	363.0	327.1	313.7
75°	318.2	295.8	277.8	264.4	291.3
77.5°	219.6	210.6	197.2	183.7	179.3
80°	143.4	138.9	134.4	130.0	125.5
82.5°	85.1	85.1	85.1	85.1	85.1
85°	44.8	49.3	53.8	58.3	62.7
87.5°	26.9	26.9	31.4	35.9	40.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)