

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: P562630

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562630
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-50-UNV-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7620.0 lumens
Efficiency: N/A
Efficacy: 88.2 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

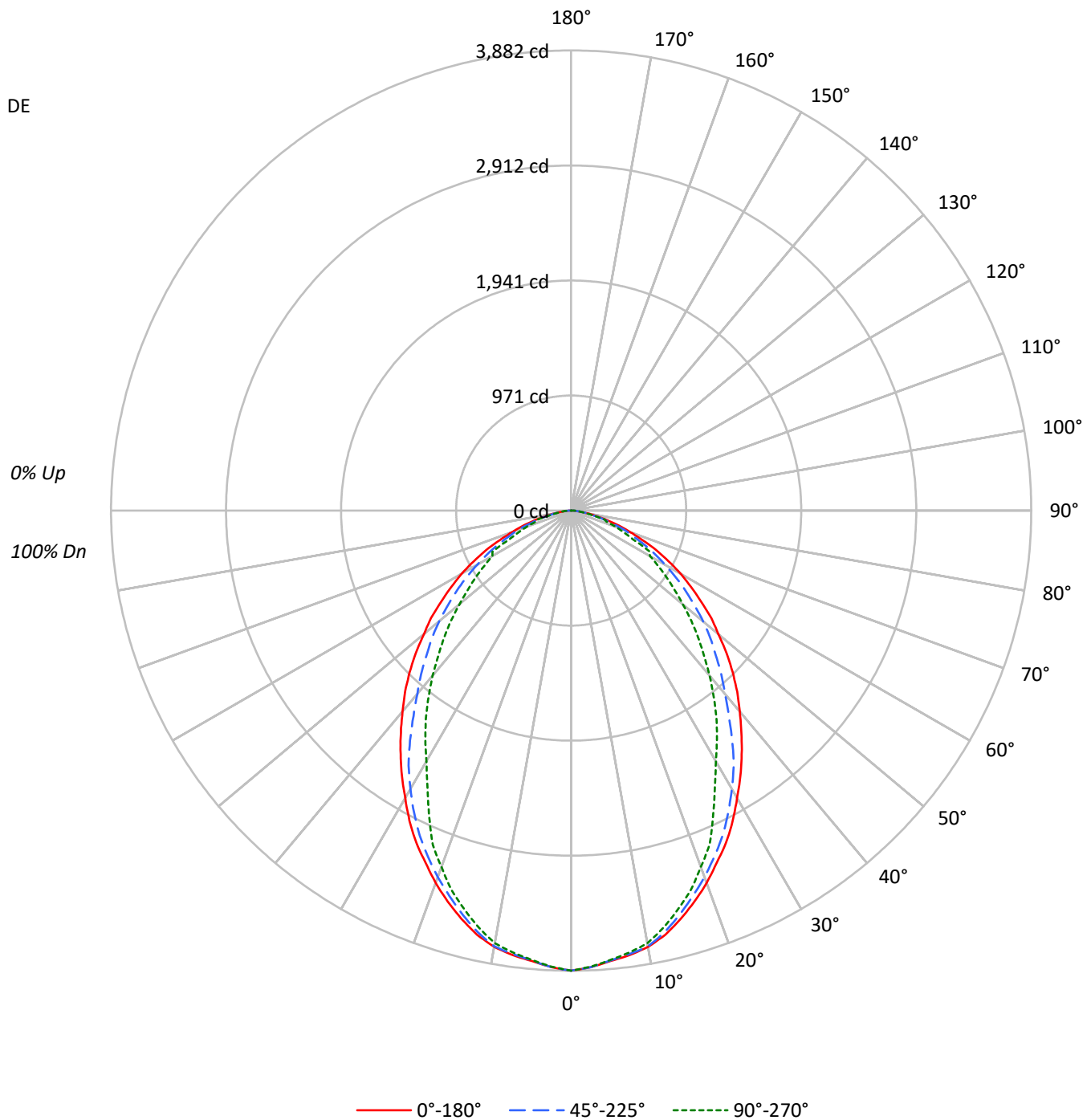
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5223	5223	5223
5°	5152	5145	5139
10°	5107	5101	5064
15°	4969	4919	4851
20°	4787	4710	4581
25°	4590	4490	4210
30°	4350	4211	3793
35°	4120	3892	3508
40°	3886	3547	3192
45°	3663	3279	2886
50°	3391	3043	2574
55°	3137	2758	2305
60°	2874	2463	2065
65°	2529	2157	1829
70°	2083	1889	1554
75°	1656	1446	1516
80°	1113	1043	973
85°	693	831	969

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3663 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.3	4.7
10°-20°	991.6	13.0
20°-30°	1372.8	18.0
30°-40°	1463.8	19.2
40°-50°	1335.4	17.5
50°-60°	1046.2	13.7
60°-70°	681.9	8.9
70°-80°	302.1	4.0
80°-90°	64.9	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°	2725.7	35.8
0°-40°	4189.6	55.0
0°-60°	6571.2	86.2
0°-90°	7620.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7620.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3882	3882	3882	3882	3882	
5°	3814	3810	3810	3805	3805	362
15°	3567	3567	3532	3496	3482	1003
25°	3092	3074	3024	2917	2836	1419
35°	2508	2490	2369	2190	2136	1568
45°	1925	1885	1723	1580	1517	1483
55°	1337	1297	1176	1037	983	1199
65°	794	749	678	691	574	783
75°	319	296	278	265	292	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°	3881.5	3881.5	3881.5	3881.5	3881.5
2.5°	3854.6	3854.6	3854.6	3850.1	3850.1
5°	3814.2	3809.7	3809.7	3805.2	3805.2
7.5°	3782.8	3778.3	3773.8	3769.3	3760.4
10°	3737.9	3737.9	3733.4	3711.0	3706.5
12.5°	3666.1	3661.6	3643.7	3612.3	3603.3
15°	3567.4	3567.4	3531.5	3495.6	3482.2
17.5°	3459.7	3455.2	3410.4	3374.5	3356.5
20°	3343.0	3334.1	3289.2	3230.9	3199.5
22.5°	3212.9	3212.9	3159.1	3082.8	3051.4
25°	3091.8	3073.8	3024.4	2916.8	2836.0
27.5°	2952.7	2925.7	2871.9	2719.3	2625.1
30°	2800.1	2786.6	2710.3	2512.9	2441.1
32.5°	2656.5	2634.1	2553.3	2346.9	2288.5
35°	2508.4	2490.5	2369.3	2189.8	2136.0
37.5°	2360.3	2337.9	2185.3	2041.7	1974.4
40°	2212.2	2185.3	2019.3	1889.2	1817.4
42.5°	2073.1	2037.2	1875.7	1736.6	1655.8
45°	1925.1	1884.7	1723.1	1579.5	1516.7
47.5°	1777.0	1741.1	1593.0	1444.9	1373.1
50°	1619.9	1588.5	1453.9	1305.8	1229.5
52.5°	1489.8	1440.4	1310.3	1162.2	1099.4
55°	1337.2	1296.8	1175.7	1036.6	982.7
57.5°	1198.1	1157.7	1045.5	915.4	870.5
60°	1068.0	1009.6	915.4	803.2	767.3
62.5°	924.4	879.5	798.7	704.5	749.4
65°	794.3	749.4	677.6	691.0	574.4
67.5°	650.7	628.2	565.4	502.6	484.6
70°	529.5	502.6	480.1	412.8	394.9
72.5°	421.8	394.9	363.5	327.6	314.1
75°	318.6	296.2	278.2	264.8	291.7
77.5°	219.9	210.9	197.4	184.0	179.5
80°	143.6	139.1	134.6	130.1	125.6
82.5°	85.3	85.3	85.3	85.3	85.3
85°	44.9	49.4	53.8	58.3	62.8
87.5°	26.9	26.9	31.4	35.9	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)