

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: P561415

Luminaire Tested: FSR-12-4-LD4-2HI-40-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561415
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-12-4-LD4-2HI-40-UNV-81-87-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7330.0 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

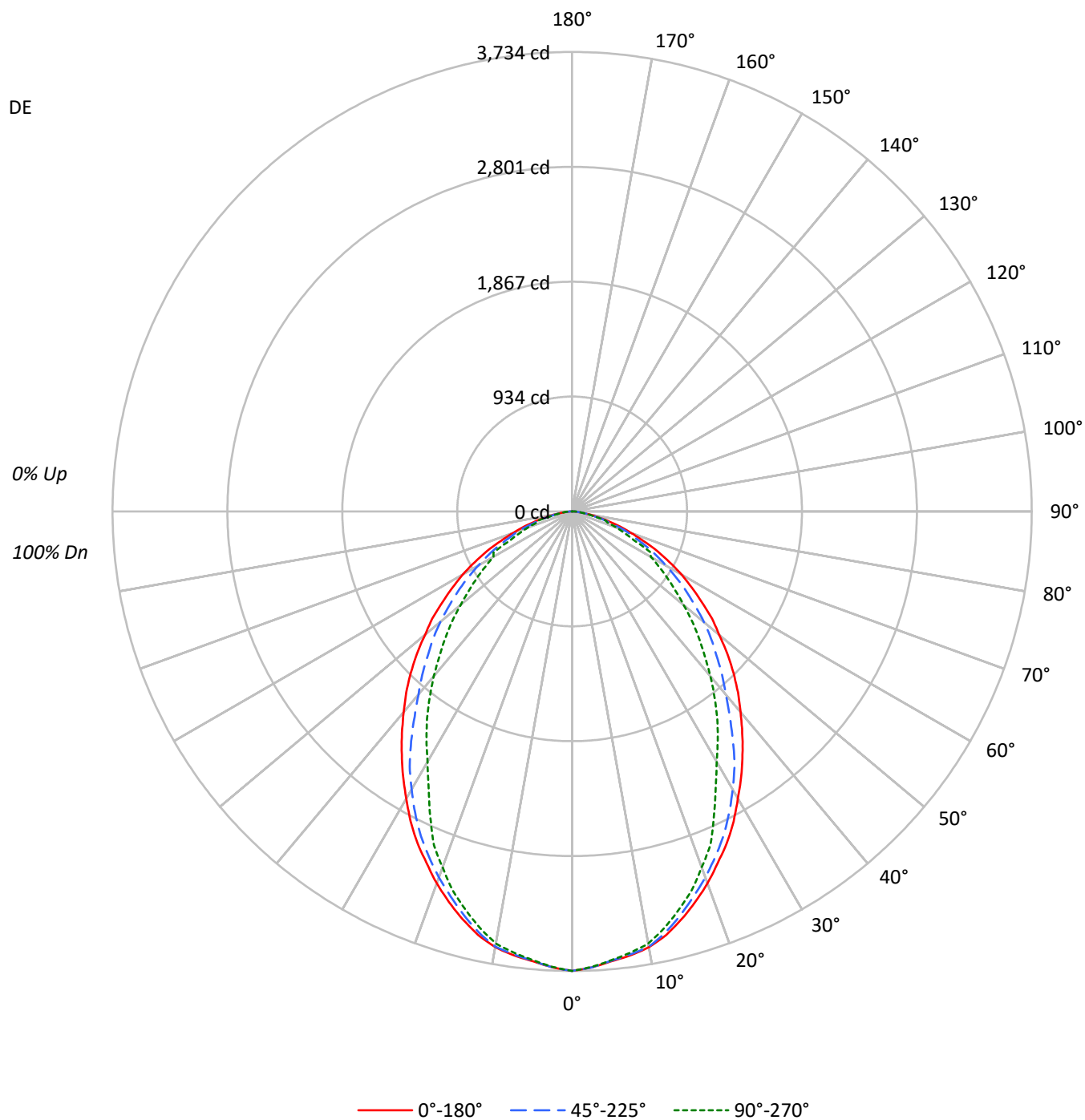
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	10048	10048	10048
5°	9911	9899	9888
10°	9825	9813	9743
15°	9560	9464	9332
20°	9209	9061	8814
25°	8831	8638	8100
30°	8369	8101	7297
35°	7927	7487	6750
40°	7476	6823	6141
45°	7047	6308	5552
50°	6524	5855	4951
55°	6035	5306	4435
60°	5529	4739	3972
65°	4865	4150	3518
70°	4008	3634	2989
75°	3187	2782	2917
80°	2140	2007	1874
85°	1334	1599	1865

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 7047 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.6	4.7
10°-20°	953.9	13.0
20°-30°	1320.6	18.0
30°-40°	1408.1	19.2
40°-50°	1284.6	17.5
50°-60°	1006.4	13.7
60°-70°	655.9	8.9
70°-80°	290.6	4.0
80°-90°	62.4	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°	2622.0	35.8
0°-40°	4030.1	55.0
0°-60°	6321.1	86.2
0°-90°	7330.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7330.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3734	3734	3734	3734	3734	
5°	3669	3665	3665	3660	3660	348
15°	3432	3432	3397	3363	3350	965
25°	2974	2957	2909	2806	2728	1365
35°	2413	2396	2279	2106	2055	1509
45°	1852	1813	1658	1519	1459	1426
55°	1286	1248	1131	997	945	1154
65°	764	721	652	665	552	753
75°	306	285	268	255	281	328
85°	43	48	52	56	60	60
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3733.8	3733.8	3733.8	3733.8	3733.8
2.5°	3707.9	3707.9	3707.9	3703.6	3703.6
5°	3669.1	3664.7	3664.7	3660.4	3660.4
7.5°	3638.8	3634.5	3630.2	3625.9	3617.3
10°	3595.7	3595.7	3591.4	3569.8	3565.5
12.5°	3526.6	3522.3	3505.0	3474.8	3466.2
15°	3431.6	3431.6	3397.1	3362.6	3349.6
17.5°	3328.0	3323.7	3280.6	3246.0	3228.8
20°	3215.8	3207.2	3164.0	3107.9	3077.7
22.5°	3090.6	3090.6	3038.8	2965.5	2935.2
25°	2974.1	2956.8	2909.3	2805.7	2728.1
27.5°	2840.3	2814.4	2762.6	2615.8	2525.2
30°	2693.5	2680.6	2607.2	2417.3	2348.2
32.5°	2555.4	2533.8	2456.1	2257.5	2201.4
35°	2412.9	2395.7	2279.1	2106.5	2054.7
37.5°	2270.5	2248.9	2102.2	1964.0	1899.3
40°	2128.1	2102.2	1942.4	1817.3	1748.2
42.5°	1994.2	1959.7	1804.3	1670.5	1592.8
45°	1851.8	1812.9	1657.6	1519.4	1459.0
47.5°	1709.3	1674.8	1532.4	1389.9	1320.9
50°	1558.3	1528.1	1398.6	1256.1	1182.7
52.5°	1433.1	1385.6	1260.4	1118.0	1057.6
55°	1286.3	1247.5	1130.9	997.1	945.3
57.5°	1152.5	1113.7	1005.8	880.6	837.4
60°	1027.3	971.2	880.6	772.7	738.1
62.5°	889.2	846.0	768.3	677.7	720.9
65°	764.0	720.9	651.8	664.7	552.5
67.5°	625.9	604.3	543.9	483.5	466.2
70°	509.4	483.5	461.9	397.1	379.9
72.5°	405.8	379.9	349.6	315.1	302.2
75°	306.5	284.9	267.6	254.7	280.6
77.5°	211.5	202.9	189.9	177.0	172.7
80°	138.1	133.8	129.5	125.2	120.9
82.5°	82.0	82.0	82.0	82.0	82.0
85°	43.2	47.5	51.8	56.1	60.4
87.5°	25.9	25.9	30.2	34.5	38.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)