

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: P590462

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590462
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-3HI-40-UNV-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6752.0 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

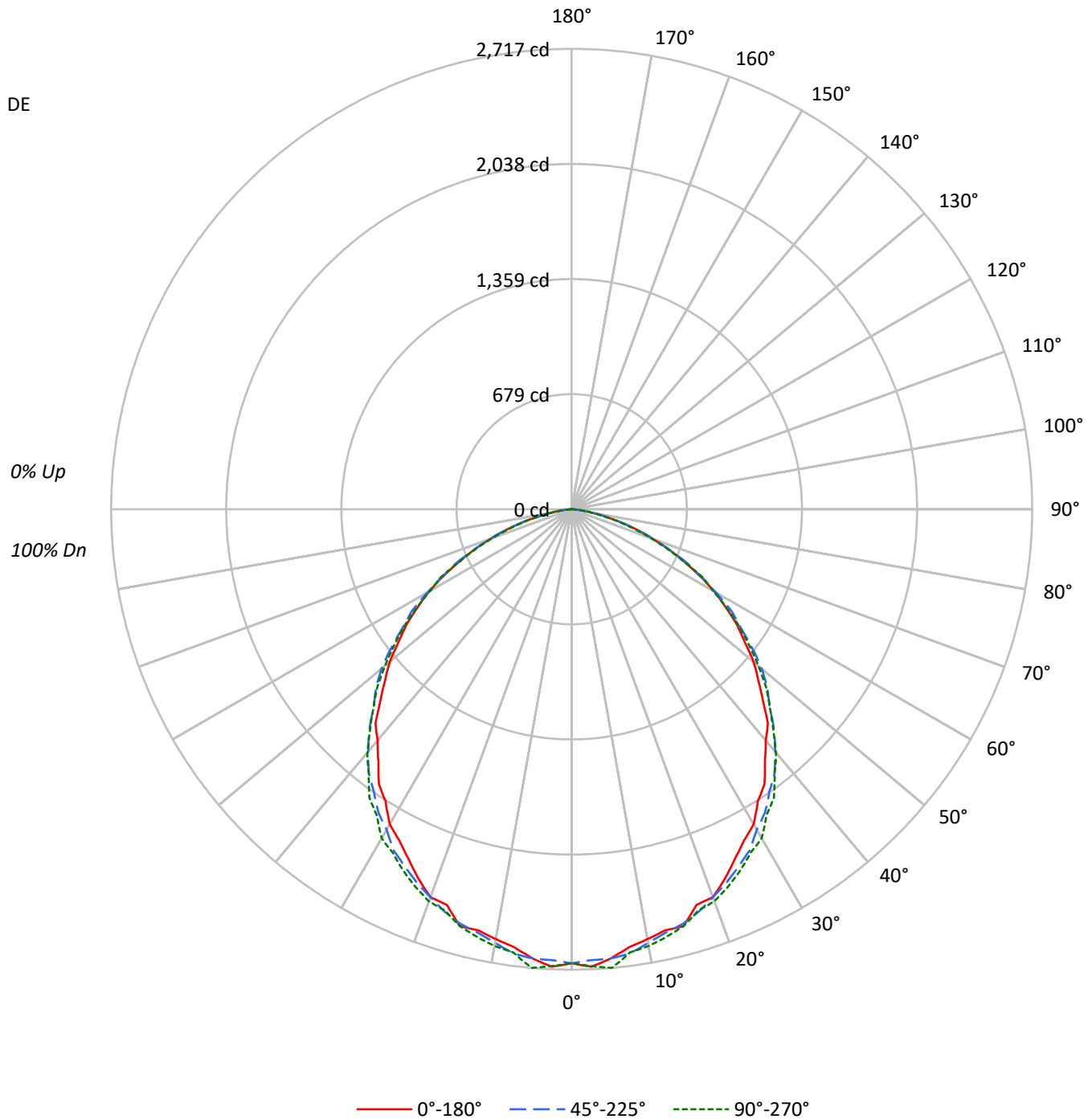
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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																												
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7209	7209	7209
5°	7185	7188	7340
10°	7040	7101	7151
15°	7095	7057	7096
20°	6976	6976	7050
25°	6761	6909	6985
30°	6668	6785	6966
35°	6511	6682	6832
40°	6258	6559	6588
45°	6068	6284	6294
50°	5869	6134	6017
55°	5592	5701	5660
60°	5229	5281	5187
65°	4663	4782	4630
70°	4001	4014	3902
75°	3168	3161	3039
80°	2123	2064	1984
85°	1155	1142	1068

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6446 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.0	3.7
10°-20°	714.2	10.6
20°-30°	1070.0	15.8
30°-40°	1268.2	18.8
40°-50°	1270.6	18.8
50°-60°	1078.5	16.0
60°-70°	727.1	10.8
70°-80°	319.5	4.7
80°-90°	51.9	0.8
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°	2036.2	30.2
0°-40°	3304.4	48.9
0°-60°	5653.5	83.7
0°-90°	6752.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6752.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2679	2679	2679	2679	2679	
5°	2660	2654	2661	2653	2717	251
15°	2547	2518	2533	2546	2547	710
25°	2277	2290	2327	2357	2352	1053
35°	1982	1988	2034	2081	2080	1231
45°	1595	1624	1651	1694	1654	1234
55°	1192	1184	1215	1207	1206	1060
65°	732	723	751	722	727	728
75°	305	298	304	283	292	327
85°	37	36	37	36	35	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2679.0	2679.0	2679.0	2679.0	2679.0
2.5°	2702.2	2681.8	2662.8	2684.9	2698.4
5°	2660.0	2653.8	2661.0	2653.1	2717.1
7.5°	2605.3	2629.2	2643.0	2634.4	2638.2
10°	2576.3	2568.0	2598.8	2620.2	2617.1
12.5°	2545.2	2557.6	2559.3	2582.5	2584.6
15°	2546.9	2517.5	2533.1	2546.2	2547.2
17.5°	2448.0	2479.8	2490.5	2520.6	2483.2
20°	2435.9	2412.7	2435.9	2466.6	2461.8
22.5°	2361.5	2335.5	2385.4	2412.7	2410.9
25°	2277.1	2289.5	2326.9	2357.3	2352.5
27.5°	2203.1	2217.6	2270.9	2312.7	2285.7
30°	2146.0	2138.7	2183.7	2221.0	2241.8
32.5°	2043.9	2070.2	2122.8	2159.8	2140.1
35°	1982.0	1987.9	2033.9	2081.0	2079.6
37.5°	1873.8	1901.1	1965.8	1978.9	1966.8
40°	1781.4	1808.7	1867.2	1881.4	1875.5
42.5°	1713.3	1718.1	1768.3	1784.5	1758.6
45°	1594.6	1624.4	1651.3	1693.9	1653.8
47.5°	1493.6	1507.4	1565.6	1577.0	1555.9
50°	1401.9	1406.8	1465.2	1451.1	1437.2
52.5°	1286.8	1307.2	1340.0	1337.3	1321.0
55°	1192.0	1184.0	1215.2	1206.9	1206.5
57.5°	1078.2	1092.0	1117.6	1104.5	1083.4
60°	971.6	972.0	981.3	966.5	963.7
62.5°	853.0	857.1	859.2	840.9	870.6
65°	732.3	722.6	751.0	722.2	727.1
67.5°	621.2	626.1	623.3	605.3	612.2
70°	508.5	514.7	510.2	489.8	496.0
72.5°	405.4	397.8	402.6	377.0	388.8
75°	304.7	298.5	304.0	282.6	292.3
77.5°	207.5	212.4	208.9	197.5	204.1
80°	137.0	133.2	133.2	126.6	128.0
82.5°	79.9	76.1	75.1	73.0	76.1
85°	37.4	36.3	37.0	36.0	34.6
87.5°	13.5	13.8	13.8	13.1	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)