

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: P590429

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590429
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-35-UNV-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6821.0 lumens
Efficiency: N/A
Efficacy: 105.3 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

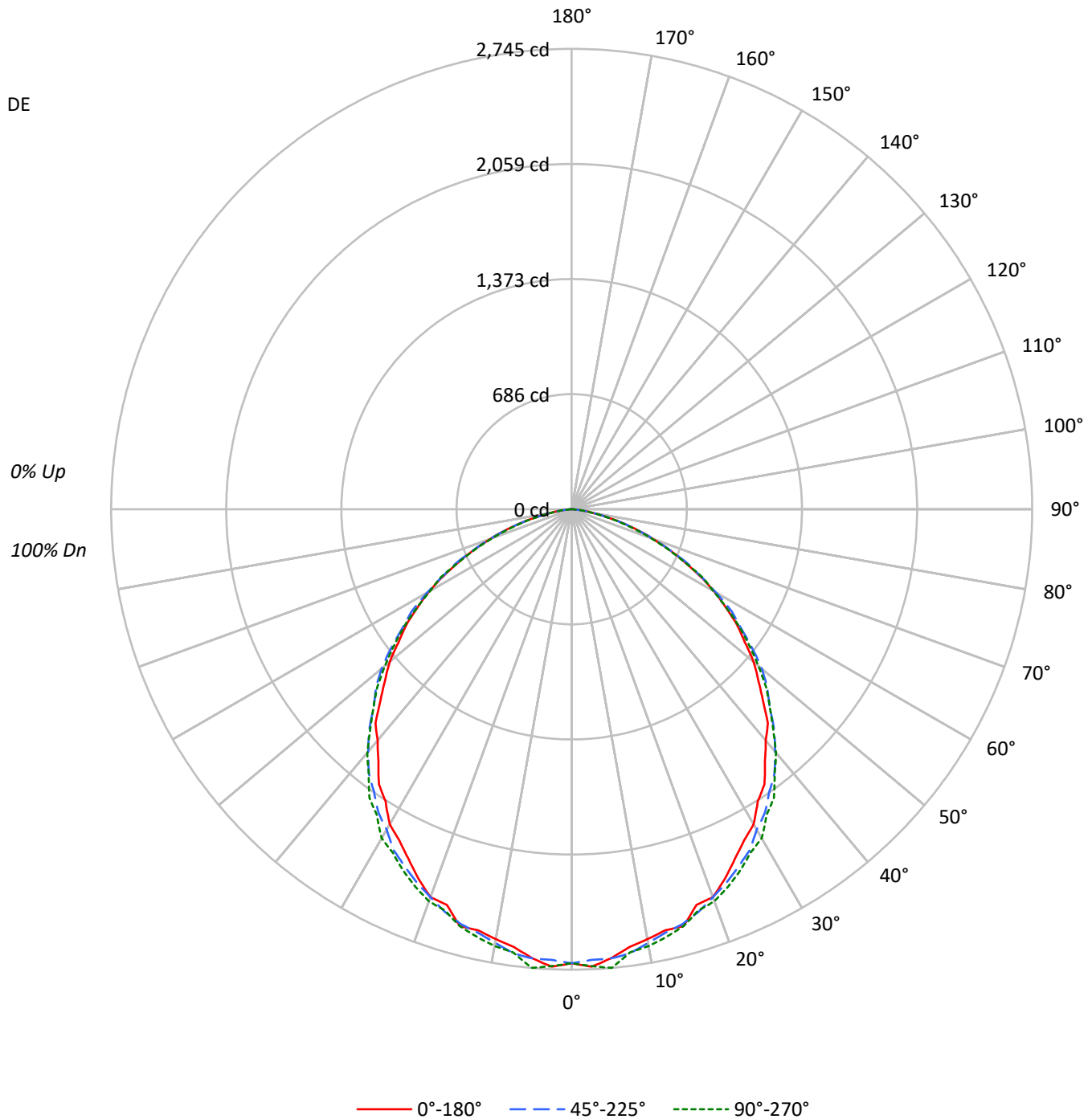
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									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	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°	7283	7283	7283
5°	7259	7262	7414
10°	7112	7174	7224
15°	7168	7129	7169
20°	7047	7047	7122
25°	6830	6980	7056
30°	6736	6855	7037
35°	6578	6750	6901
40°	6322	6626	6656
45°	6130	6349	6358
50°	5929	6197	6078
55°	5650	5759	5718
60°	5283	5336	5239
65°	4711	4830	4677
70°	4042	4055	3943
75°	3201	3194	3070
80°	2145	2084	2004
85°	1164	1155	1078

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6512 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.6	3.7
10°-20°	721.5	10.6
20°-30°	1081.0	15.8
30°-40°	1281.2	18.8
40°-50°	1283.5	18.8
50°-60°	1089.5	16.0
60°-70°	734.5	10.8
70°-80°	322.8	4.7
80°-90°	52.4	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°	2057.0	30.2
0°-40°	3338.2	48.9
0°-60°	5711.2	83.7
0°-90°	6821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6821.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2706	2706	2706	2706	2706	
5°	2687	2681	2688	2680	2745	253
15°	2573	2543	2559	2572	2573	717
25°	2300	2313	2351	2381	2376	1063
35°	2002	2008	2055	2102	2101	1243
45°	1611	1641	1668	1711	1671	1246
55°	1204	1196	1228	1219	1219	1071
65°	740	730	759	730	734	736
75°	308	302	307	286	295	330
85°	38	37	37	36	35	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2706.4	2706.4	2706.4	2706.4	2706.4
2.5°	2729.8	2709.2	2690.0	2712.3	2726.0
5°	2687.2	2680.9	2688.2	2680.2	2744.8
7.5°	2632.0	2656.1	2670.1	2661.3	2665.2
10°	2602.6	2594.2	2625.3	2647.0	2643.9
12.5°	2571.2	2583.7	2585.5	2608.9	2611.0
15°	2572.9	2543.2	2558.9	2572.2	2573.3
17.5°	2473.0	2505.1	2516.0	2546.4	2508.6
20°	2460.7	2437.3	2460.7	2491.8	2487.0
22.5°	2385.6	2359.4	2409.7	2437.3	2435.6
25°	2300.4	2312.9	2350.7	2381.4	2376.5
27.5°	2225.6	2240.2	2294.1	2336.3	2309.1
30°	2167.9	2160.6	2206.0	2243.7	2264.7
32.5°	2064.8	2091.4	2144.5	2181.9	2162.0
35°	2002.3	2008.2	2054.7	2102.2	2100.8
37.5°	1892.9	1920.5	1985.9	1999.1	1986.9
40°	1799.6	1827.2	1886.3	1900.6	1894.7
42.5°	1730.8	1735.7	1786.3	1802.8	1776.5
45°	1610.9	1641.0	1668.2	1711.2	1670.7
47.5°	1508.9	1522.9	1581.6	1593.1	1571.8
50°	1416.3	1421.2	1480.2	1465.9	1451.9
52.5°	1299.9	1320.5	1353.7	1350.9	1334.5
55°	1204.2	1196.1	1227.6	1219.2	1218.8
57.5°	1089.2	1103.2	1129.0	1115.8	1094.4
60°	981.6	981.9	991.4	976.3	973.5
62.5°	861.7	865.9	868.0	849.5	879.5
65°	739.8	730.0	758.6	729.6	734.5
67.5°	627.6	632.5	629.7	611.5	618.5
70°	513.7	520.0	515.4	494.8	501.1
72.5°	409.5	401.9	406.7	380.9	392.8
75°	307.9	301.6	307.2	285.5	295.3
77.5°	209.7	214.6	211.1	199.5	206.2
80°	138.4	134.5	134.5	127.9	129.3
82.5°	80.7	76.9	75.8	73.7	76.9
85°	37.7	36.7	37.4	36.3	34.9
87.5°	13.6	14.0	14.0	13.3	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)