

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: P590729

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590729
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-LD4-4HI-35-UNV-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7517.0 lumens
Efficiency: N/A
Efficacy: 87.0 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

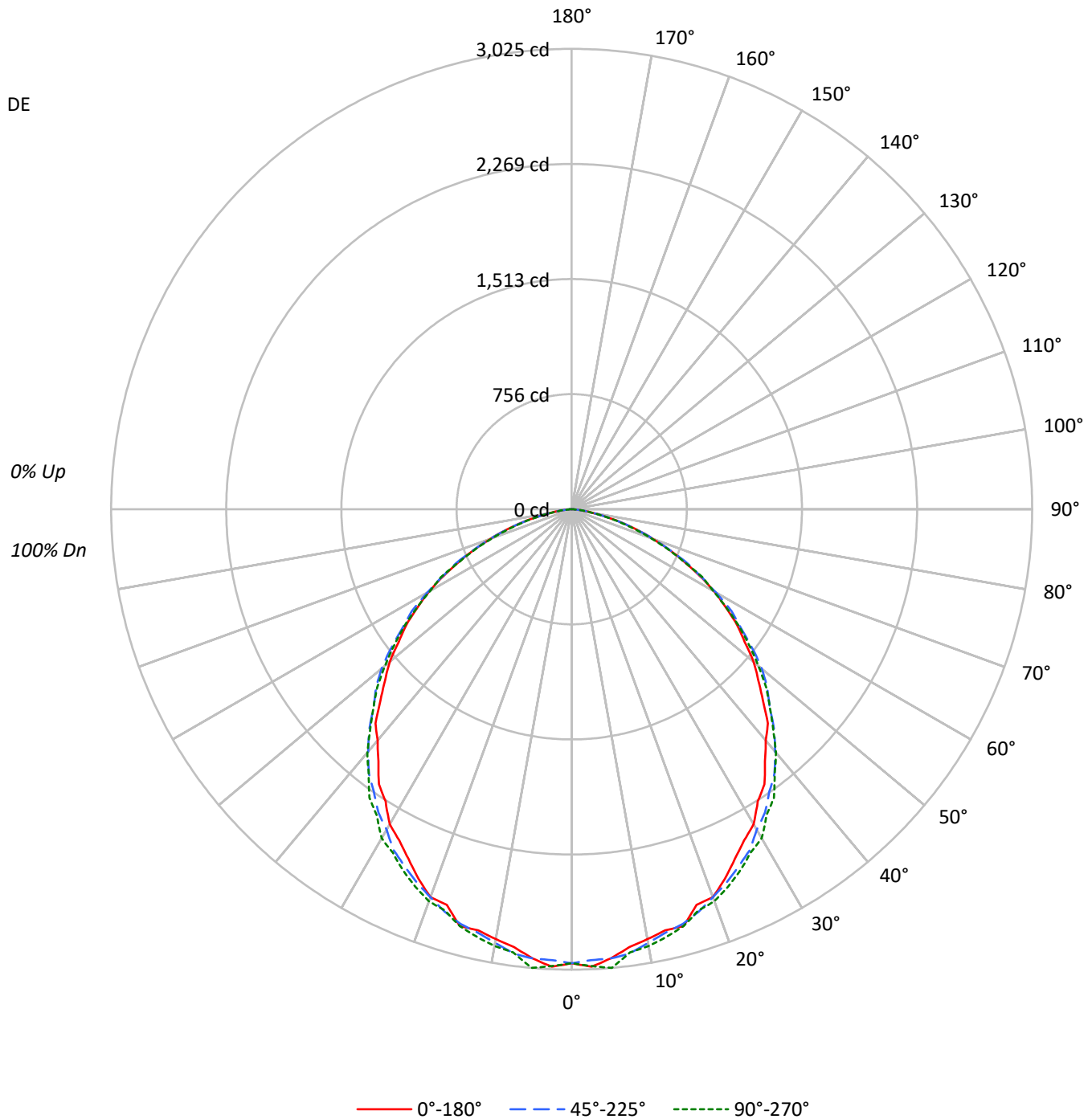
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	8026	8026	8026
5°	8000	8002	8171
10°	7837	7906	7961
15°	7899	7856	7900
20°	7766	7766	7848
25°	7527	7692	7776
30°	7424	7554	7755
35°	7249	7439	7606
40°	6967	7302	7335
45°	6756	6996	7007
50°	6534	6829	6699
55°	6226	6347	6302
60°	5822	5880	5774
65°	5191	5323	5154
70°	4454	4469	4345
75°	3528	3519	3383
80°	2363	2298	2208
85°	1284	1272	1189

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7177 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	280.6	3.7
10°-20°	795.1	10.6
20°-30°	1191.3	15.8
30°-40°	1411.9	18.8
40°-50°	1414.5	18.8
50°-60°	1200.7	16.0
60°-70°	809.5	10.8
70°-80°	355.7	4.7
80°-90°	57.8	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°	2266.9	30.2
0°-40°	3678.8	48.9
0°-60°	6294.0	83.7
0°-90°	7517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7517.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2983	2983	2983	2983	2983	
5°	2961	2954	2962	2954	3025	279
15°	2835	2803	2820	2835	2836	790
25°	2535	2549	2590	2624	2619	1172
35°	2207	2213	2264	2317	2315	1370
45°	1775	1808	1838	1886	1841	1373
55°	1327	1318	1353	1344	1343	1180
65°	815	804	836	804	810	811
75°	339	332	338	315	325	364
85°	42	40	41	40	38	60
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2982.6	2982.6	2982.6	2982.6	2982.6
2.5°	3008.4	2985.6	2964.5	2989.1	3004.1
5°	2961.4	2954.4	2962.5	2953.7	3024.9
7.5°	2900.5	2927.1	2942.5	2932.9	2937.1
10°	2868.2	2858.9	2893.2	2917.1	2913.6
12.5°	2833.5	2847.4	2849.3	2875.1	2877.4
15°	2835.4	2802.7	2820.0	2834.7	2835.8
17.5°	2725.3	2760.7	2772.7	2806.2	2764.6
20°	2711.8	2686.0	2711.8	2746.1	2740.7
22.5°	2629.0	2600.2	2655.6	2686.0	2684.1
25°	2535.1	2548.9	2590.5	2624.4	2619.0
27.5°	2452.7	2468.8	2528.1	2574.7	2544.7
30°	2389.1	2381.0	2431.1	2472.7	2495.8
32.5°	2275.5	2304.8	2363.3	2404.5	2382.6
35°	2206.6	2213.1	2264.4	2316.7	2315.2
37.5°	2086.1	2116.5	2188.5	2203.1	2189.6
40°	1983.2	2013.7	2078.7	2094.5	2088.0
42.5°	1907.4	1912.8	1968.6	1986.7	1957.8
45°	1775.3	1808.4	1838.4	1885.8	1841.1
47.5°	1662.8	1678.2	1742.9	1755.6	1732.2
50°	1560.8	1566.2	1631.3	1615.5	1600.1
52.5°	1432.6	1455.3	1491.9	1488.8	1470.7
55°	1327.0	1318.2	1352.8	1343.6	1343.2
57.5°	1200.3	1215.7	1244.2	1229.6	1206.1
60°	1081.7	1082.1	1092.5	1076.0	1072.9
62.5°	949.6	954.3	956.6	936.2	969.3
65°	815.2	804.5	836.0	804.1	809.5
67.5°	691.6	697.0	693.9	673.9	681.6
70°	566.1	573.0	568.0	545.3	552.2
72.5°	451.3	442.9	448.2	419.8	432.8
75°	339.3	332.3	338.5	314.6	325.4
77.5°	231.1	236.4	232.6	219.9	227.2
80°	152.5	148.3	148.3	140.9	142.5
82.5°	89.0	84.7	83.6	81.3	84.7
85°	41.6	40.4	41.2	40.0	38.5
87.5°	15.0	15.4	15.4	14.6	13.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)