

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: P563400

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563400
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-LD4-3LO-50-UNV-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

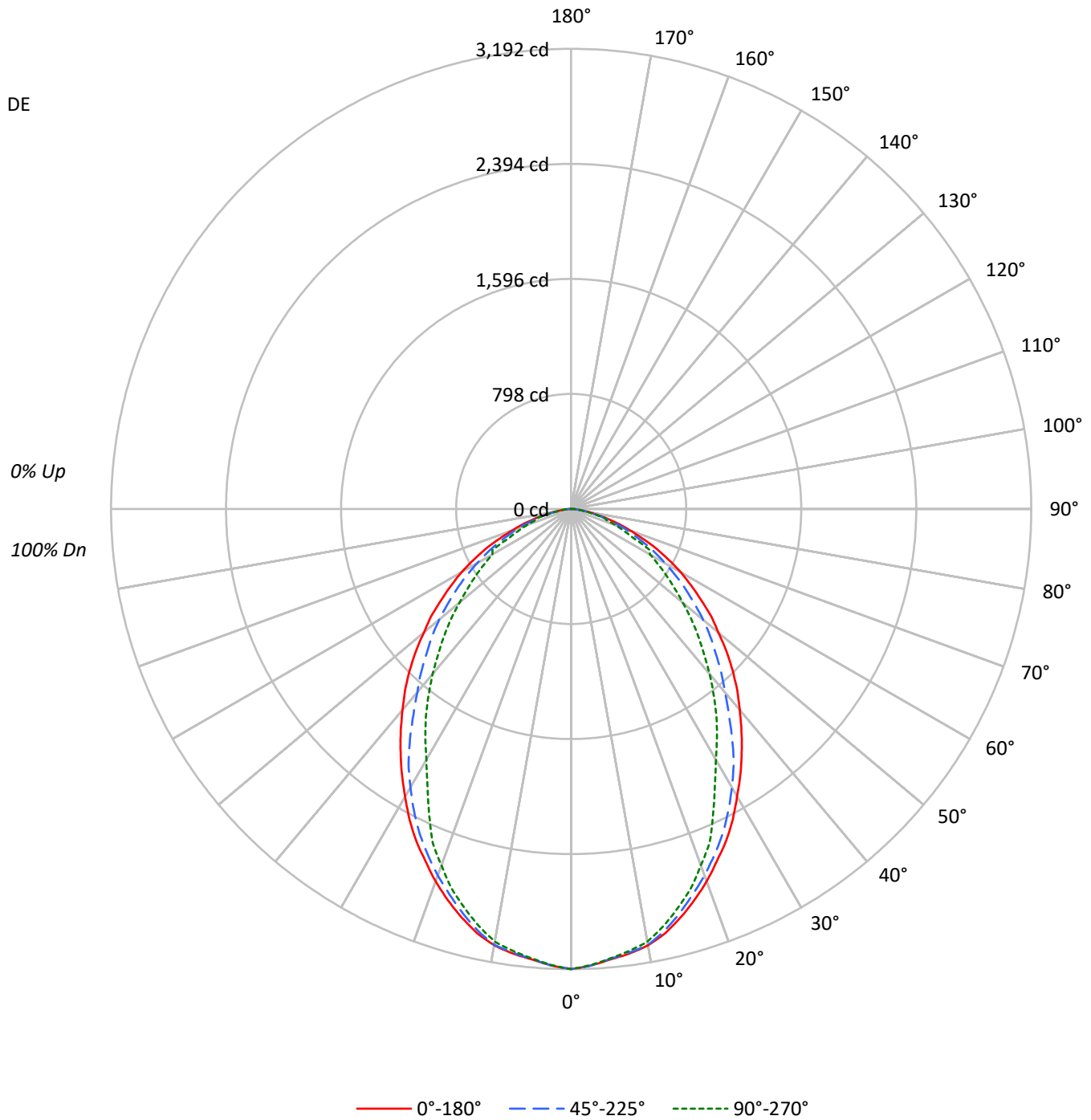
Lumens per Lamp: N/A
Luminaire Lumens: 6266.0 lumens
Efficiency: N/A
Efficacy: 89.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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



TEST NUMBER: P563400
CATALOG NUMBER: FSR-24-4-LD4-3LO-50-UNV-81-88-EDD-90

Luminous Intensity Polar Plot



TEST NUMBER: P563400

CATALOG NUMBER: FSR-24-4-LD4-3LO-50-UNV-81-88-EDD-90

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	50	30	10	0																
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°	4295	4295	4295
5°	4236	4231	4226
10°	4199	4194	4164
15°	4086	4045	3989
20°	3936	3873	3767
25°	3774	3692	3462
30°	3577	3463	3119
35°	3388	3200	2885
40°	3195	2917	2625
45°	3012	2696	2373
50°	2788	2502	2116
55°	2579	2268	1896
60°	2363	2026	1698
65°	2079	1774	1504
70°	1713	1553	1277
75°	1362	1189	1247
80°	915	858	800
85°	570	684	798

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3012 cd/sqm



TEST NUMBER: P563400

CATALOG NUMBER: FSR-24-4-LD4-3LO-50-UNV-81-88-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.1	4.7
10°-20°	815.4	13.0
20°-30°	1128.9	18.0
30°-40°	1203.7	19.2
40°-50°	1098.1	17.5
50°-60°	860.3	13.7
60°-70°	560.7	8.9
70°-80°	248.4	4.0
80°-90°	53.3	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°	2241.4	35.8
0°-40°	3445.1	55.0
0°-60°	5403.5	86.2
0°-90°	6266.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6266.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3192	3192	3192	3192	3192	
5°	3136	3133	3133	3129	3129	298
15°	2934	2934	2904	2874	2863	825
25°	2542	2528	2487	2398	2332	1167
35°	2063	2048	1948	1801	1756	1290
45°	1583	1550	1417	1299	1247	1219
55°	1100	1066	967	852	808	986
65°	653	616	557	568	472	644
75°	262	244	229	218	240	281
85°	37	41	44	48	52	51
90°	0	0	0	0	0	



TEST NUMBER: P563400

CATALOG NUMBER: FSR-24-4-LD4-3LO-50-UNV-81-88-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3191.8	3191.8	3191.8	3191.8	3191.8
2.5°	3169.7	3169.7	3169.7	3166.0	3166.0
5°	3136.5	3132.8	3132.8	3129.1	3129.1
7.5°	3110.6	3106.9	3103.3	3099.6	3092.2
10°	3073.7	3073.7	3070.0	3051.6	3047.9
12.5°	3014.7	3011.0	2996.2	2970.4	2963.0
15°	2933.5	2933.5	2904.0	2874.5	2863.4
17.5°	2845.0	2841.3	2804.4	2774.9	2760.1
20°	2749.0	2741.6	2704.7	2656.8	2630.9
22.5°	2642.0	2642.0	2597.7	2535.0	2509.2
25°	2542.4	2527.6	2487.0	2398.5	2332.1
27.5°	2428.0	2405.9	2361.6	2236.1	2158.6
30°	2302.5	2291.5	2228.7	2066.4	2007.3
32.5°	2184.5	2166.0	2099.6	1929.8	1881.9
35°	2062.7	2047.9	1948.3	1800.7	1756.4
37.5°	1940.9	1922.5	1797.0	1678.9	1623.6
40°	1819.2	1797.0	1660.5	1553.5	1494.4
42.5°	1704.8	1675.2	1542.4	1428.0	1361.6
45°	1583.0	1549.8	1416.9	1298.9	1247.2
47.5°	1461.2	1431.7	1309.9	1188.2	1129.1
50°	1332.1	1306.2	1195.5	1073.8	1011.0
52.5°	1225.1	1184.5	1077.5	955.7	904.0
55°	1099.6	1066.4	966.8	852.4	808.1
57.5°	985.2	952.0	859.8	752.8	715.9
60°	878.2	830.2	752.8	660.5	631.0
62.5°	760.1	723.2	656.8	579.3	616.2
65°	653.1	616.2	557.2	568.3	472.3
67.5°	535.0	516.6	464.9	413.3	398.5
70°	435.4	413.3	394.8	339.5	324.7
72.5°	346.9	324.7	298.9	269.4	258.3
75°	262.0	243.5	228.8	217.7	239.8
77.5°	180.8	173.4	162.4	151.3	147.6
80°	118.1	114.4	110.7	107.0	103.3
82.5°	70.1	70.1	70.1	70.1	70.1
85°	36.9	40.6	44.3	48.0	51.7
87.5°	22.1	22.1	25.8	29.5	33.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)