

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: P589928

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589928
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-LD4-1HI-50-UNV-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

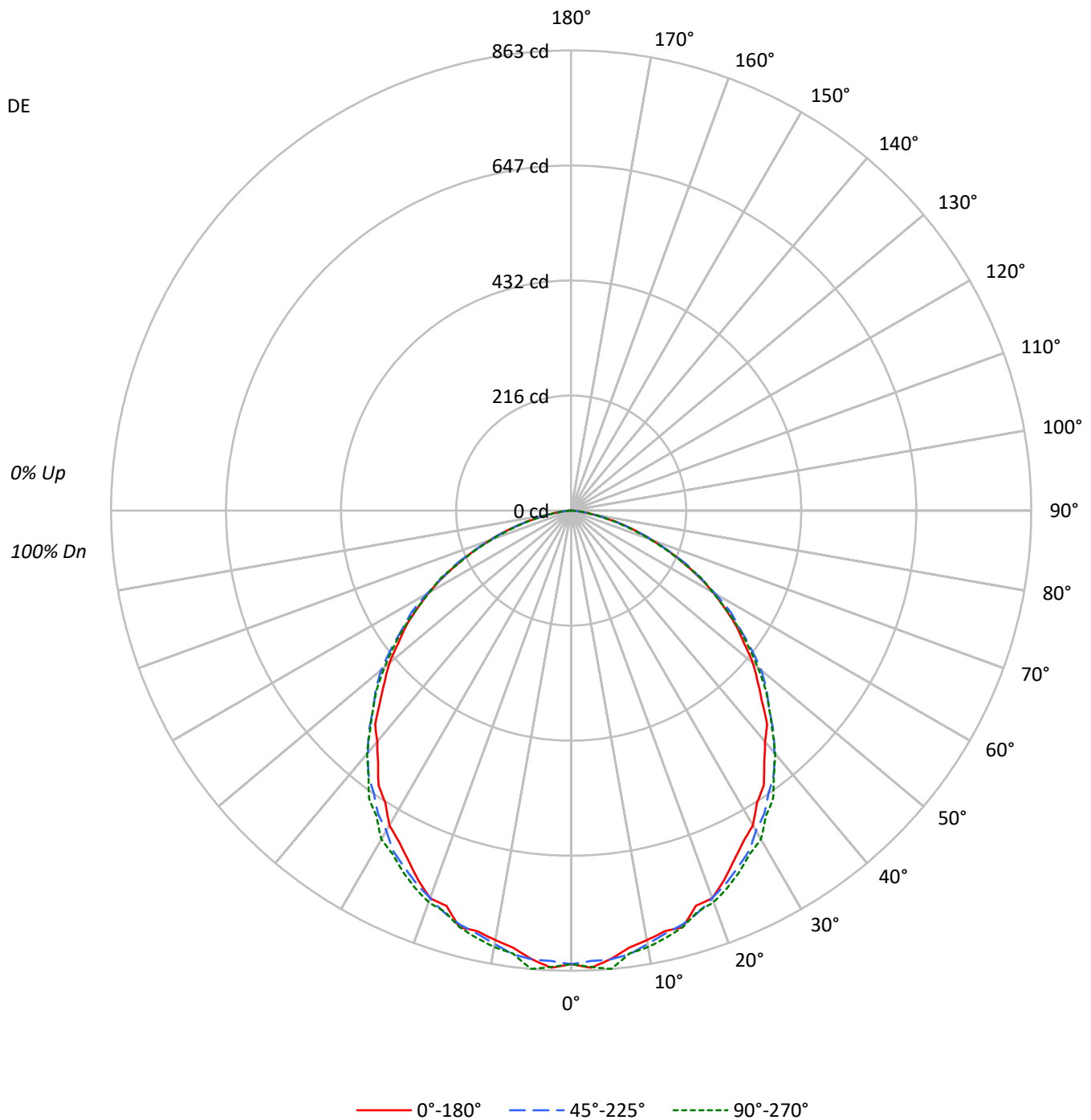
Lumens per Lamp: N/A
Luminaire Lumens: 2144.0 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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: P589928
CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-82-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589928

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-82-87-EDD

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	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°	2289	2289	2289
5°	2281	2283	2331
10°	2235	2255	2271
15°	2253	2241	2253
20°	2215	2215	2239
25°	2147	2194	2218
30°	2117	2155	2212
35°	2068	2122	2169
40°	1987	2083	2092
45°	1927	1996	1998
50°	1864	1948	1911
55°	1776	1810	1797
60°	1660	1677	1647
65°	1480	1519	1470
70°	1271	1275	1239
75°	1006	1003	965
80°	674	656	629
85°	367	364	340

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2047 cd/sqm



TEST NUMBER: P589928

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-82-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.0	3.7
10°-20°	226.8	10.6
20°-30°	339.8	15.8
30°-40°	402.7	18.8
40°-50°	403.4	18.8
50°-60°	342.5	16.0
60°-70°	230.9	10.8
70°-80°	101.4	4.7
80°-90°	16.5	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°	646.6	30.2
0°-40°	1049.3	48.9
0°-60°	1795.2	83.7
0°-90°	2144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2144.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	851	851	851	851	851	
5°	845	843	845	842	863	80
15°	809	799	804	808	809	225
25°	723	727	739	748	747	334
35°	629	631	646	661	660	391
45°	506	516	524	538	525	392
55°	378	376	386	383	383	337
65°	232	229	238	229	231	231
75°	97	95	96	90	93	104
85°	12	12	12	11	11	17
90°	0	0	0	0	0	



TEST NUMBER: P589928

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-82-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	850.7	850.7	850.7	850.7	850.7
2.5°	858.0	851.6	845.5	852.6	856.8
5°	844.6	842.7	845.0	842.4	862.8
7.5°	827.3	834.9	839.3	836.5	837.7
10°	818.1	815.4	825.2	832.0	831.0
12.5°	808.2	812.1	812.7	820.0	820.7
15°	808.7	799.4	804.3	808.5	808.8
17.5°	777.3	787.4	790.8	800.4	788.5
20°	773.5	766.1	773.5	783.2	781.7
22.5°	749.9	741.6	757.4	766.1	765.6
25°	723.1	727.0	738.9	748.5	747.0
27.5°	699.5	704.2	721.1	734.4	725.8
30°	681.4	679.1	693.4	705.3	711.9
32.5°	649.0	657.4	674.1	685.8	679.6
35°	629.4	631.2	645.8	660.8	660.3
37.5°	595.0	603.7	624.2	628.4	624.5
40°	565.7	574.3	592.9	597.4	595.5
42.5°	544.0	545.6	561.5	566.6	558.4
45°	506.3	515.8	524.4	537.9	525.1
47.5°	474.3	478.7	497.1	500.7	494.0
50°	445.2	446.7	465.3	460.8	456.4
52.5°	408.6	415.1	425.5	424.6	419.5
55°	378.5	376.0	385.9	383.2	383.1
57.5°	342.4	346.8	354.9	350.7	344.0
60°	308.5	308.6	311.6	306.9	306.0
62.5°	270.9	272.2	272.8	267.0	276.5
65°	232.5	229.4	238.5	229.3	230.9
67.5°	197.3	198.8	197.9	192.2	194.4
70°	161.5	163.4	162.0	155.5	157.5
72.5°	128.7	126.3	127.8	119.7	123.5
75°	96.8	94.8	96.5	89.7	92.8
77.5°	65.9	67.4	66.3	62.7	64.8
80°	43.5	42.3	42.3	40.2	40.6
82.5°	25.4	24.2	23.8	23.2	24.2
85°	11.9	11.5	11.8	11.4	11.0
87.5°	4.3	4.4	4.4	4.2	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)