

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: P589863

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589863
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-35-UNV-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

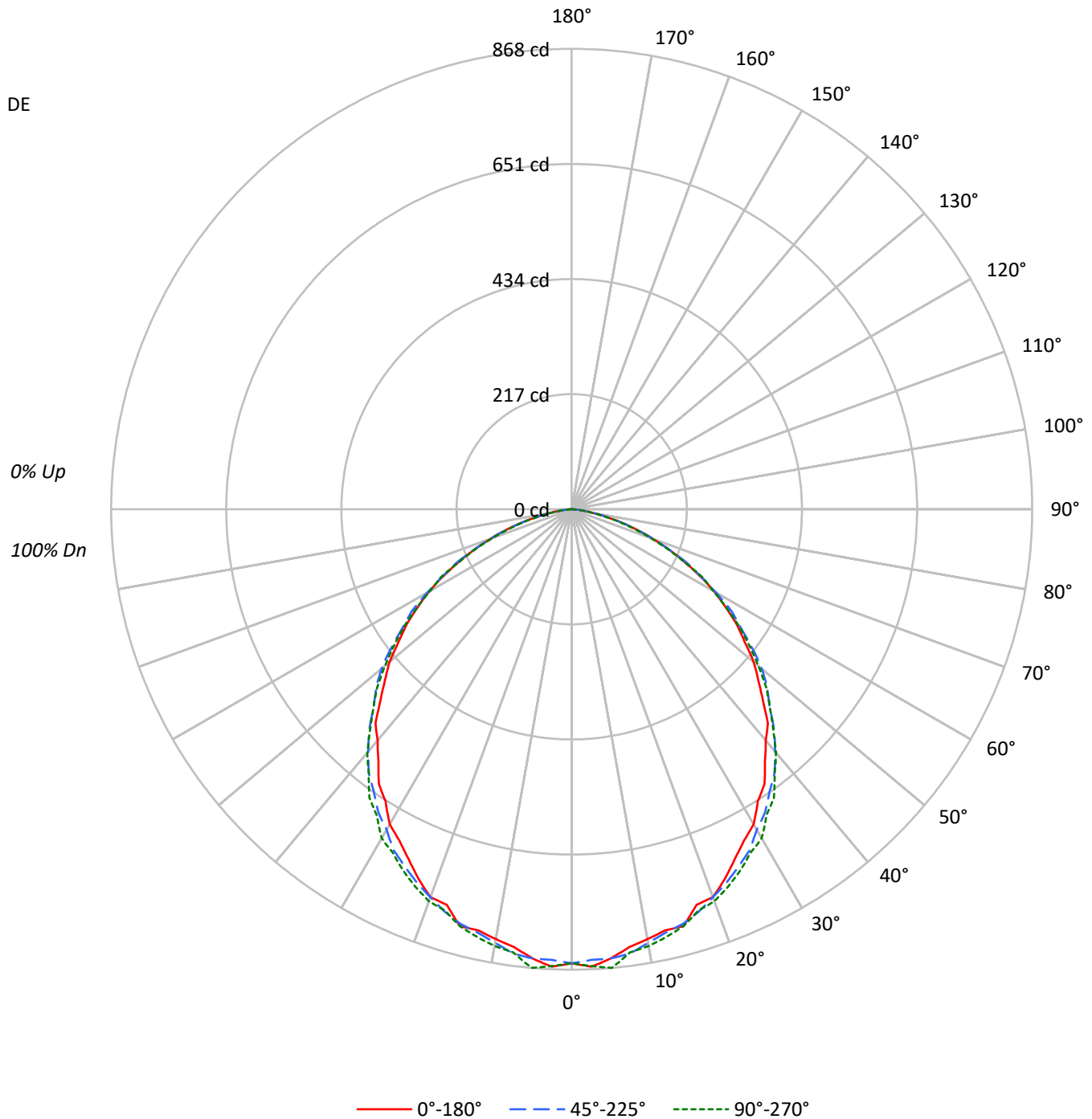
Lumens per Lamp: N/A
Luminaire Lumens: 2157.0 lumens
Efficiency: N/A
Efficacy: 99.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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: P589863
CATALOG NUMBER: FSR-24-2-LD4-1HI-35-UNV-82-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589863

CATALOG NUMBER: FSR-24-2-LD4-1HI-35-UNV-82-86-EDD

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°	2303	2303	2303
5°	2296	2296	2345
10°	2249	2269	2285
15°	2267	2254	2267
20°	2229	2229	2252
25°	2160	2207	2231
30°	2130	2168	2225
35°	2080	2135	2182
40°	1999	2095	2105
45°	1939	2007	2011
50°	1875	1960	1922
55°	1787	1821	1808
60°	1671	1687	1657
65°	1489	1528	1479
70°	1278	1282	1247
75°	1013	1010	971
80°	679	659	634
85°	367	364	343

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2059 cd/sqm



TEST NUMBER: P589863

CATALOG NUMBER: FSR-24-2-LD4-1HI-35-UNV-82-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.5	3.7
10°-20°	228.2	10.6
20°-30°	341.8	15.8
30°-40°	405.1	18.8
40°-50°	405.9	18.8
50°-60°	344.5	16.0
60°-70°	232.3	10.8
70°-80°	102.1	4.7
80°-90°	16.6	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°	650.5	30.2
0°-40°	1055.6	48.9
0°-60°	1806.1	83.7
0°-90°	2157.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2157.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	856	856	856	856	856	
5°	850	848	850	848	868	80
15°	814	804	809	813	814	227
25°	727	731	743	753	752	336
35°	633	635	650	665	664	393
45°	509	519	528	541	528	394
55°	381	378	388	386	385	339
65°	234	231	240	231	232	233
75°	97	95	97	90	93	104
85°	12	12	12	12	11	17
90°	0	0	0	0	0	



TEST NUMBER: P589863

CATALOG NUMBER: FSR-24-2-LD4-1HI-35-UNV-82-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	855.8	855.8	855.8	855.8	855.8
2.5°	863.2	856.7	850.6	857.7	862.0
5°	849.8	847.8	850.1	847.6	868.0
7.5°	832.3	839.9	844.4	841.6	842.8
10°	823.0	820.4	830.2	837.1	836.1
12.5°	813.1	817.1	817.6	825.0	825.7
15°	813.6	804.2	809.2	813.4	813.7
17.5°	782.0	792.2	795.6	805.2	793.3
20°	778.2	770.8	778.2	788.0	786.4
22.5°	754.4	746.1	762.0	770.8	770.2
25°	727.4	731.4	743.4	753.1	751.5
27.5°	703.8	708.4	725.4	738.8	730.2
30°	685.6	683.2	697.6	709.5	716.2
32.5°	653.0	661.4	678.2	690.0	683.7
35°	633.2	635.1	649.8	664.8	664.3
37.5°	598.6	607.3	628.0	632.2	628.3
40°	569.1	577.8	596.5	601.0	599.1
42.5°	547.3	548.9	564.9	570.1	561.8
45°	509.4	518.9	527.5	541.1	528.3
47.5°	477.2	481.6	500.1	503.8	497.0
50°	447.9	449.4	468.1	463.6	459.1
52.5°	411.1	417.6	428.1	427.2	422.0
55°	380.8	378.3	388.2	385.5	385.4
57.5°	344.4	348.9	357.0	352.8	346.1
60°	310.4	310.5	313.5	308.7	307.9
62.5°	272.5	273.8	274.5	268.6	278.1
65°	233.9	230.8	239.9	230.7	232.3
67.5°	198.5	200.0	199.1	193.4	195.6
70°	162.4	164.4	163.0	156.5	158.5
72.5°	129.5	127.1	128.6	120.4	124.2
75°	97.4	95.4	97.1	90.3	93.4
77.5°	66.3	67.8	66.7	63.1	65.2
80°	43.8	42.5	42.5	40.4	40.9
82.5°	25.5	24.3	24.0	23.3	24.3
85°	11.9	11.6	11.8	11.5	11.1
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)