

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: P589886

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589886
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-40-UNV-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2251.0 lumens
Efficiency: N/A
Efficacy: 104.2 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

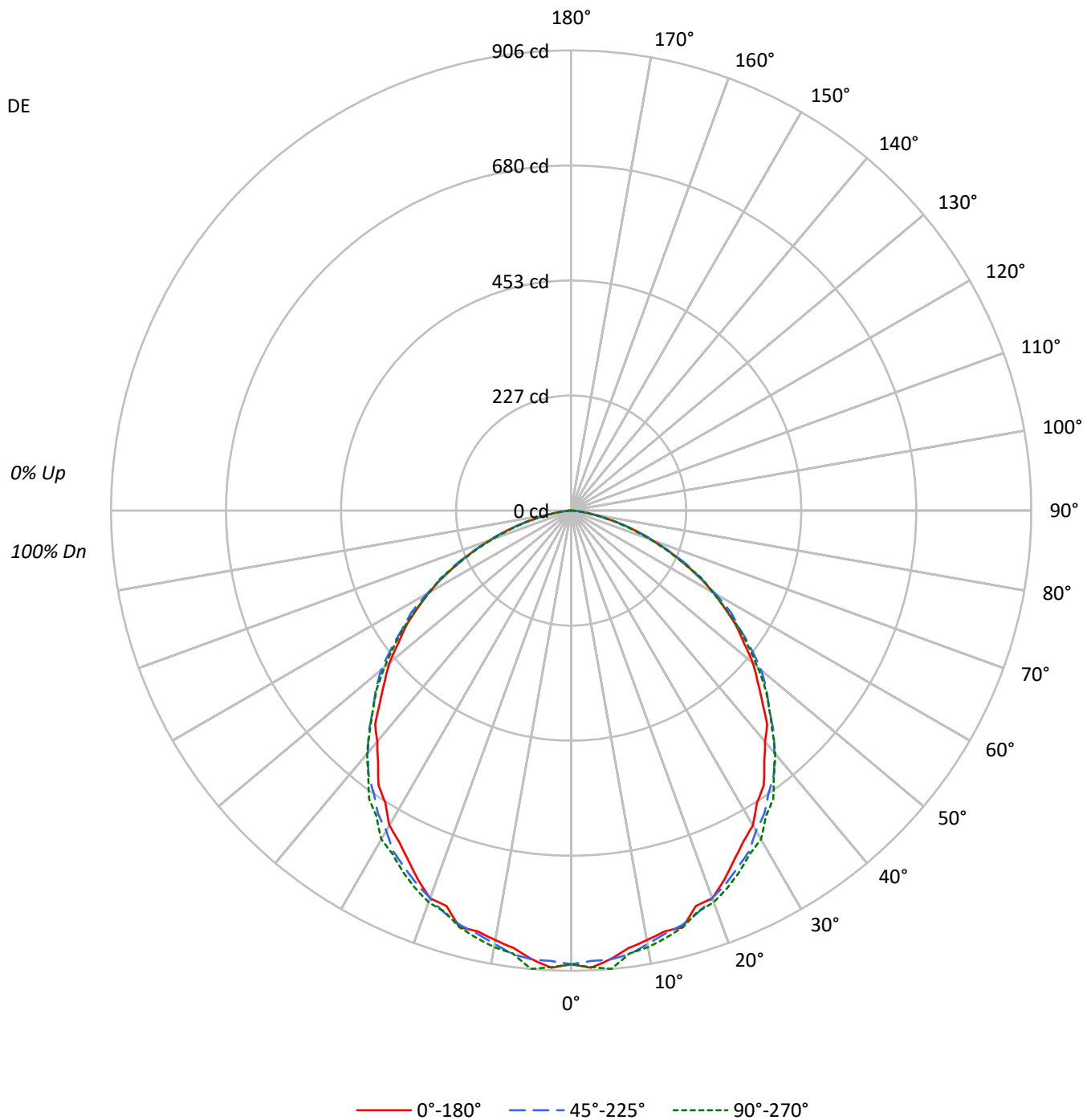
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P589886

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-81-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589886

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-81-85-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	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°	2403	2403	2403
5°	2395	2396	2447
10°	2347	2367	2384
15°	2366	2353	2366
20°	2326	2326	2350
25°	2254	2303	2329
30°	2223	2262	2322
35°	2171	2228	2278
40°	2086	2187	2197
45°	2023	2095	2098
50°	1957	2045	2006
55°	1864	1901	1887
60°	1743	1761	1729
65°	1554	1594	1543
70°	1334	1338	1301
75°	1056	1054	1013
80°	708	688	662
85°	386	380	355

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2149 cd/sqm



TEST NUMBER: P589886

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-81-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.0	3.7
10°-20°	238.1	10.6
20°-30°	356.7	15.8
30°-40°	422.8	18.8
40°-50°	423.6	18.8
50°-60°	359.5	16.0
60°-70°	242.4	10.8
70°-80°	106.5	4.7
80°-90°	17.3	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°	678.8	30.2
0°-40°	1101.6	48.9
0°-60°	1884.8	83.7
0°-90°	2251.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2251.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	893	893	893	893	893	
5°	887	885	887	884	906	84
15°	849	839	844	849	849	237
25°	759	763	776	786	784	351
35°	661	663	678	694	693	410
45°	532	542	550	565	551	411
55°	397	395	405	402	402	353
65°	244	241	250	241	242	243
75°	102	100	101	94	97	109
85°	12	12	12	12	12	18
90°	0	0	0	0	0	



TEST NUMBER: P589886

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-81-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	893.1	893.1	893.1	893.1	893.1
2.5°	900.9	894.1	887.7	895.1	899.6
5°	886.8	884.7	887.1	884.5	905.8
7.5°	868.6	876.5	881.1	878.3	879.5
10°	858.9	856.1	866.4	873.5	872.5
12.5°	848.5	852.7	853.2	861.0	861.7
15°	849.1	839.3	844.5	848.9	849.2
17.5°	816.1	826.7	830.3	840.3	827.9
20°	812.1	804.3	812.1	822.3	820.7
22.5°	787.3	778.6	795.2	804.3	803.8
25°	759.1	763.3	775.7	785.9	784.3
27.5°	734.5	739.3	757.1	771.0	762.0
30°	715.4	713.0	728.0	740.5	747.4
32.5°	681.4	690.2	707.7	720.0	713.5
35°	660.8	662.7	678.1	693.8	693.3
37.5°	624.7	633.8	655.4	659.7	655.7
40°	593.9	603.0	622.5	627.2	625.3
42.5°	571.2	572.8	589.5	594.9	586.3
45°	531.6	541.5	550.5	564.7	551.3
47.5°	497.9	502.6	521.9	525.7	518.7
50°	467.4	469.0	488.5	483.8	479.1
52.5°	429.0	435.8	446.7	445.8	440.4
55°	397.4	394.7	405.1	402.3	402.2
57.5°	359.4	364.1	372.6	368.2	361.2
60°	323.9	324.0	327.2	322.2	321.3
62.5°	284.4	285.8	286.5	280.3	290.3
65°	244.1	240.9	250.4	240.8	242.4
67.5°	207.1	208.7	207.8	201.8	204.1
70°	169.5	171.6	170.1	163.3	165.4
72.5°	135.2	132.6	134.2	125.7	129.6
75°	101.6	99.5	101.4	94.2	97.4
77.5°	69.2	70.8	69.7	65.8	68.0
80°	45.7	44.4	44.4	42.2	42.7
82.5°	26.6	25.4	25.0	24.3	25.4
85°	12.5	12.1	12.3	12.0	11.5
87.5°	4.5	4.6	4.6	4.4	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)