

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: P589893

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589893
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-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2248.0 lumens
Efficiency: N/A
Efficacy: 104.1 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

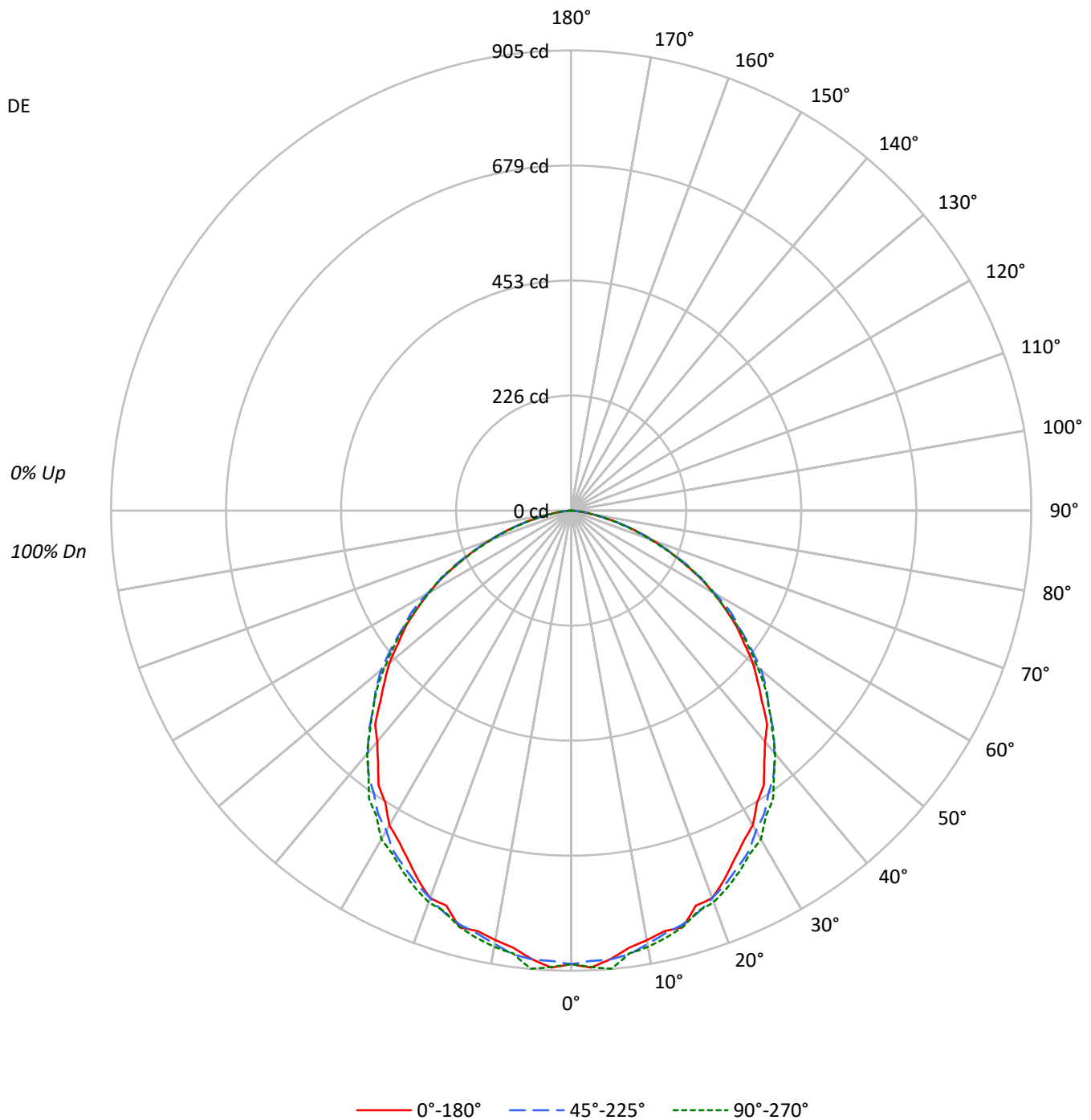
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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°	2400	2400	2400
5°	2392	2393	2444
10°	2344	2364	2381
15°	2362	2350	2363
20°	2322	2322	2347
25°	2251	2300	2325
30°	2220	2259	2319
35°	2168	2225	2275
40°	2083	2184	2193
45°	2020	2092	2095
50°	1954	2042	2003
55°	1862	1898	1885
60°	1741	1758	1727
65°	1552	1592	1542
70°	1332	1337	1299
75°	1055	1052	1012
80°	707	687	660
85°	383	380	355

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2146 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	3.7
10°-20°	237.8	10.6
20°-30°	356.3	15.8
30°-40°	422.2	18.8
40°-50°	423.0	18.8
50°-60°	359.1	16.0
60°-70°	242.1	10.8
70°-80°	106.4	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°	677.9	30.2
0°-40°	1100.2	48.9
0°-60°	1882.3	83.7
0°-90°	2248.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2248.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	892	892	892	892	892	
5°	886	884	886	883	905	83
15°	848	838	843	848	848	236
25°	758	762	775	785	783	350
35°	660	662	677	693	692	410
45°	531	541	550	564	551	411
55°	397	394	405	402	402	353
65°	244	241	250	240	242	242
75°	102	99	101	94	97	109
85°	12	12	12	12	12	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	891.9	891.9	891.9	891.9	891.9
2.5°	899.7	892.9	886.5	893.9	898.4
5°	885.6	883.5	886.0	883.3	904.6
7.5°	867.4	875.4	880.0	877.1	878.4
10°	857.7	855.0	865.2	872.4	871.3
12.5°	847.4	851.5	852.1	859.8	860.5
15°	848.0	838.2	843.4	847.7	848.1
17.5°	815.0	825.6	829.2	839.2	826.8
20°	811.0	803.3	811.0	821.2	819.6
22.5°	786.2	777.6	794.2	803.3	802.7
25°	758.1	762.3	774.7	784.8	783.2
27.5°	733.5	738.3	756.1	770.0	761.0
30°	714.5	712.1	727.0	739.5	746.4
32.5°	680.5	689.3	706.8	719.1	712.5
35°	659.9	661.9	677.2	692.8	692.4
37.5°	623.8	632.9	654.5	658.9	654.8
40°	593.1	602.2	621.7	626.4	624.4
42.5°	570.4	572.0	588.7	594.1	585.5
45°	530.9	540.8	549.8	564.0	550.6
47.5°	497.3	501.9	521.2	525.0	518.0
50°	466.8	468.4	487.8	483.1	478.5
52.5°	428.4	435.2	446.1	445.2	439.8
55°	396.9	394.2	404.6	401.8	401.7
57.5°	359.0	363.6	372.1	367.7	360.7
60°	323.5	323.6	326.7	321.8	320.8
62.5°	284.0	285.4	286.1	280.0	289.9
65°	243.8	240.6	250.0	240.5	242.1
67.5°	206.8	208.4	207.5	201.5	203.8
70°	169.3	171.4	169.9	163.1	165.1
72.5°	135.0	132.4	134.1	125.5	129.4
75°	101.5	99.4	101.2	94.1	97.3
77.5°	69.1	70.7	69.6	65.8	67.9
80°	45.6	44.3	44.3	42.2	42.6
82.5°	26.6	25.3	25.0	24.3	25.3
85°	12.4	12.1	12.3	12.0	11.5
87.5°	4.5	4.6	4.6	4.4	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)