

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: P589958

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589958
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-LD4-1LO-35-UNV-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

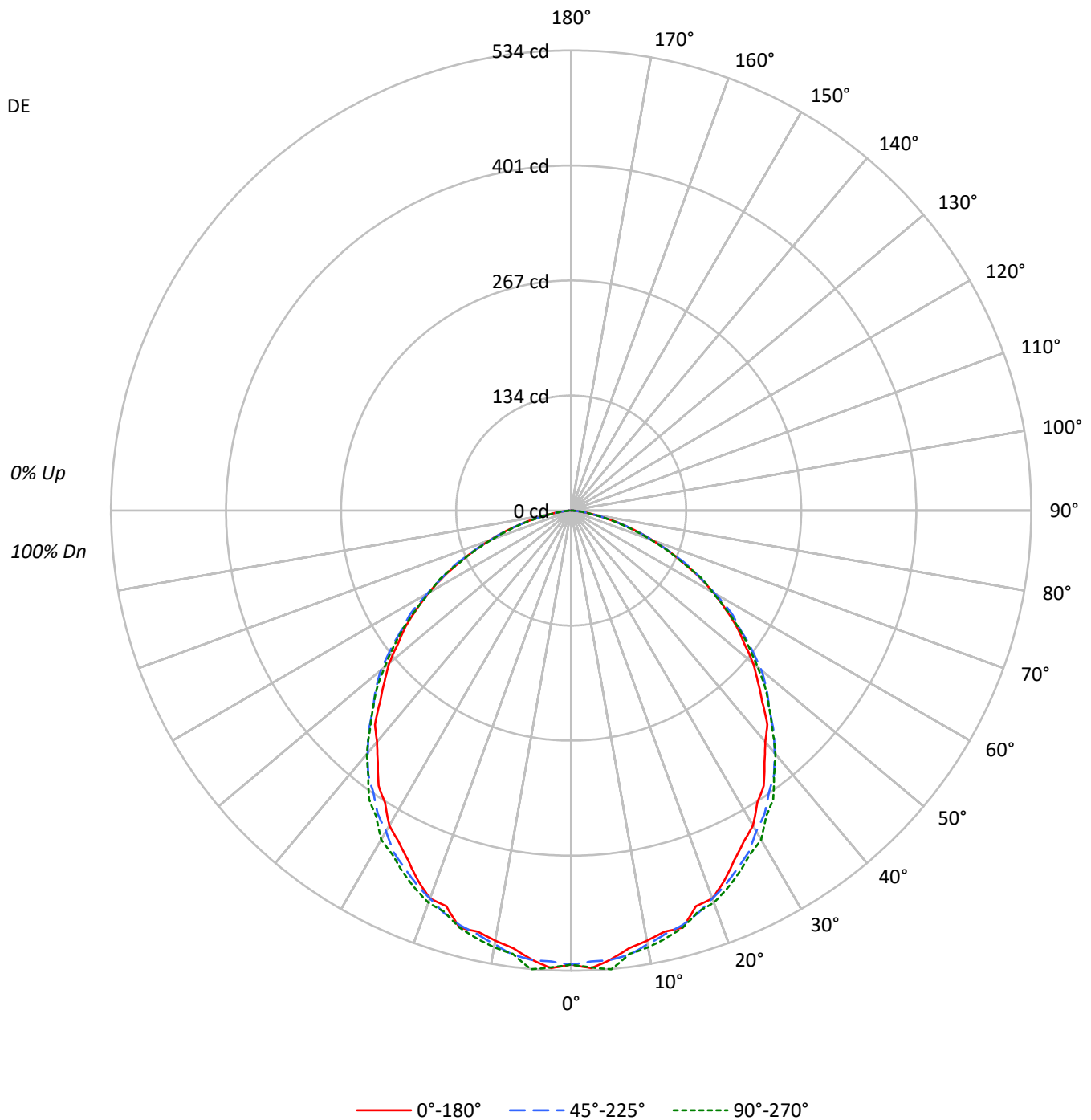
Lumens per Lamp: N/A
Luminaire Lumens: 1328.0 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	1418	1418	1418
5°	1413	1414	1444
10°	1385	1397	1406
15°	1395	1388	1396
20°	1372	1372	1387
25°	1330	1359	1374
30°	1312	1335	1370
35°	1281	1314	1344
40°	1231	1290	1296
45°	1193	1236	1238
50°	1154	1207	1184
55°	1100	1121	1113
60°	1028	1039	1020
65°	917	940	911
70°	787	789	768
75°	623	622	598
80°	417	406	391
85°	225	225	210

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1268 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.6	3.7
10°-20°	140.5	10.6
20°-30°	210.5	15.8
30°-40°	249.4	18.8
40°-50°	249.9	18.8
50°-60°	212.1	16.0
60°-70°	143.0	10.8
70°-80°	62.8	4.7
80°-90°	10.2	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°	400.5	30.2
0°-40°	649.9	48.9
0°-60°	1111.9	83.7
0°-90°	1328.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1328.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	527	527	527	527	527	
5°	523	522	523	522	534	49
15°	501	495	498	501	501	140
25°	448	450	458	464	463	207
35°	390	391	400	409	409	242
45°	314	320	325	333	325	243
55°	234	233	239	237	237	209
65°	144	142	148	142	143	143
75°	60	59	60	56	58	64
85°	7	7	7	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	526.9	526.9	526.9	526.9	526.9
2.5°	531.5	527.5	523.7	528.1	530.7
5°	523.2	522.0	523.4	521.8	534.4
7.5°	512.4	517.1	519.8	518.1	518.9
10°	506.7	505.1	511.1	515.4	514.7
12.5°	500.6	503.0	503.4	507.9	508.3
15°	500.9	495.1	498.2	500.8	501.0
17.5°	481.5	487.7	489.8	495.8	488.4
20°	479.1	474.5	479.1	485.1	484.2
22.5°	464.5	459.4	469.2	474.5	474.2
25°	447.9	450.3	457.7	463.6	462.7
27.5°	433.3	436.2	446.6	454.9	449.6
30°	422.1	420.6	429.5	436.8	440.9
32.5°	402.0	407.2	417.5	424.8	420.9
35°	389.8	391.0	400.0	409.3	409.0
37.5°	368.5	373.9	386.6	389.2	386.8
40°	350.4	355.7	367.2	370.0	368.9
42.5°	337.0	337.9	347.8	351.0	345.9
45°	313.6	319.5	324.8	333.2	325.3
47.5°	293.8	296.5	307.9	310.2	306.0
50°	275.7	276.7	288.2	285.4	282.7
52.5°	253.1	257.1	263.6	263.0	259.8
55°	234.4	232.9	239.0	237.4	237.3
57.5°	212.1	214.8	219.8	217.2	213.1
60°	191.1	191.2	193.0	190.1	189.5
62.5°	167.8	168.6	169.0	165.4	171.2
65°	144.0	142.1	147.7	142.1	143.0
67.5°	122.2	123.1	122.6	119.1	120.4
70°	100.0	101.2	100.3	96.3	97.6
72.5°	79.7	78.2	79.2	74.2	76.5
75°	59.9	58.7	59.8	55.6	57.5
77.5°	40.8	41.8	41.1	38.8	40.1
80°	26.9	26.2	26.2	24.9	25.2
82.5°	15.7	15.0	14.8	14.4	15.0
85°	7.3	7.1	7.3	7.1	6.8
87.5°	2.7	2.7	2.7	2.6	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)