

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: P589982

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589982
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-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

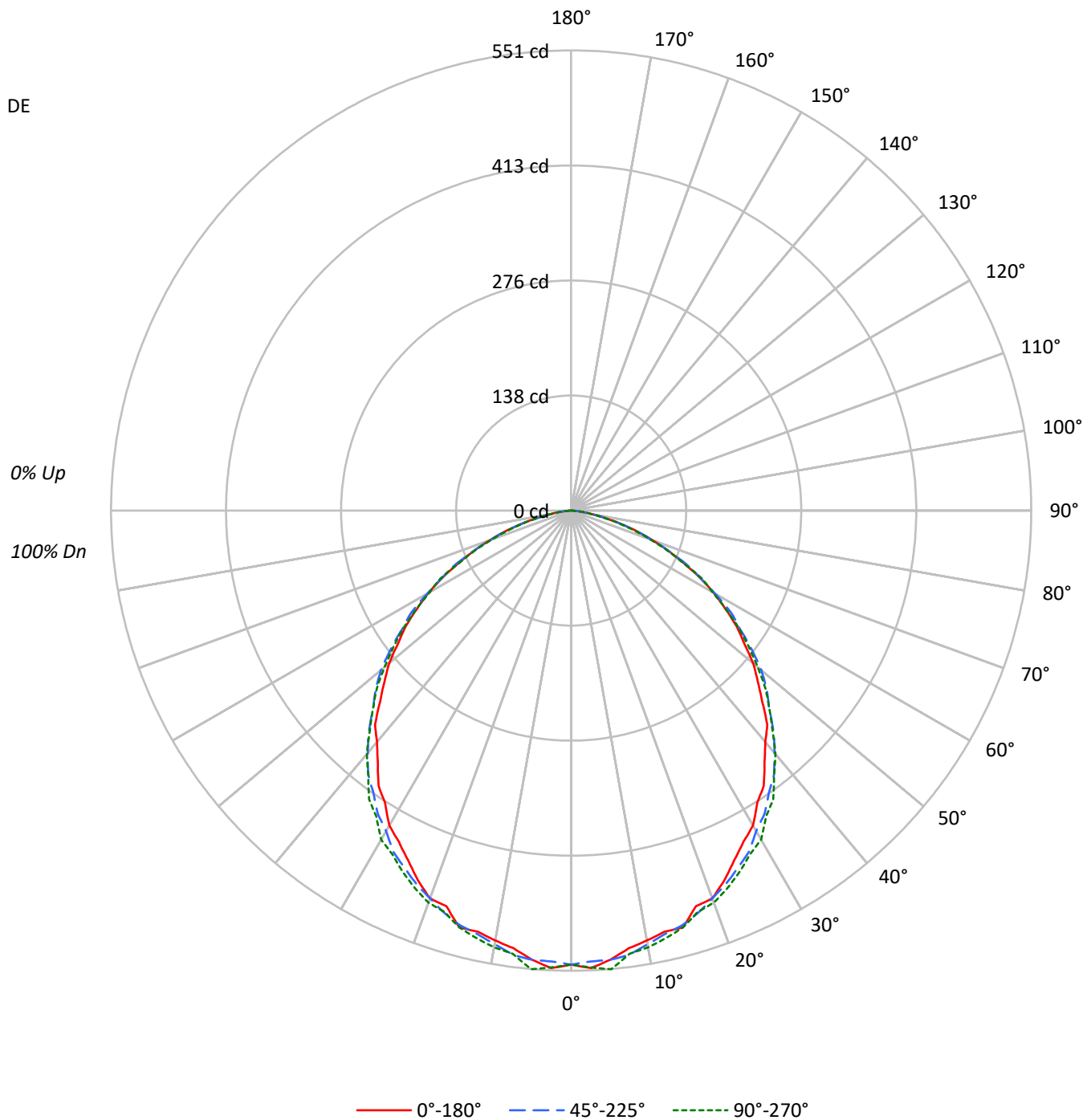
Lumens per Lamp: N/A
Luminaire Lumens: 1370.0 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	1463	1463	1463
5°	1458	1458	1489
10°	1428	1441	1451
15°	1440	1432	1440
20°	1415	1415	1430
25°	1372	1402	1417
30°	1353	1377	1413
35°	1321	1356	1386
40°	1270	1331	1337
45°	1231	1275	1277
50°	1191	1245	1221
55°	1135	1157	1148
60°	1061	1072	1052
65°	946	970	939
70°	812	814	792
75°	643	642	617
80°	431	418	403
85°	235	232	216

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1308 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.1	3.7
10°-20°	144.9	10.6
20°-30°	217.1	15.8
30°-40°	257.3	18.8
40°-50°	257.8	18.8
50°-60°	218.8	16.0
60°-70°	147.5	10.8
70°-80°	64.8	4.7
80°-90°	10.5	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°	413.2	30.2
0°-40°	670.5	48.9
0°-60°	1147.1	83.7
0°-90°	1370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	544	544	544	544	544	
5°	540	538	540	538	551	51
15°	517	511	514	517	517	144
25°	462	465	472	478	477	214
35°	402	403	413	422	422	250
45°	324	330	335	344	336	250
55°	242	240	247	245	245	215
65°	149	147	152	146	148	148
75°	62	61	62	57	59	66
85°	8	7	8	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	543.6	543.6	543.6	543.6	543.6
2.5°	548.3	544.1	540.3	544.8	547.5
5°	539.7	538.5	539.9	538.3	551.3
7.5°	528.6	533.5	536.3	534.5	535.3
10°	522.7	521.1	527.3	531.6	531.0
12.5°	516.4	518.9	519.3	524.0	524.4
15°	516.8	510.8	514.0	516.6	516.8
17.5°	496.7	503.2	505.3	511.4	503.9
20°	494.2	489.5	494.2	500.5	499.5
22.5°	479.2	473.9	484.0	489.5	489.2
25°	462.0	464.6	472.1	478.3	477.3
27.5°	447.0	450.0	460.8	469.3	463.8
30°	435.4	434.0	443.1	450.7	454.9
32.5°	414.7	420.1	430.7	438.2	434.2
35°	402.2	403.4	412.7	422.2	422.0
37.5°	380.2	385.7	398.9	401.5	399.1
40°	361.5	367.0	378.9	381.7	380.5
42.5°	347.6	348.6	358.8	362.1	356.8
45°	323.6	329.6	335.1	343.7	335.6
47.5°	303.1	305.9	317.7	320.0	315.7
50°	284.5	285.4	297.3	294.4	291.6
52.5°	261.1	265.2	271.9	271.3	268.0
55°	241.9	240.2	246.6	244.9	244.8
57.5°	218.8	221.6	226.8	224.1	219.8
60°	197.1	197.2	199.1	196.1	195.5
62.5°	173.1	173.9	174.3	170.6	176.7
65°	148.6	146.6	152.4	146.5	147.5
67.5°	126.1	127.0	126.5	122.8	124.2
70°	103.2	104.4	103.5	99.4	100.6
72.5°	82.3	80.7	81.7	76.5	78.9
75°	61.8	60.6	61.7	57.3	59.3
77.5°	42.1	43.1	42.4	40.1	41.4
80°	27.8	27.0	27.0	25.7	26.0
82.5°	16.2	15.4	15.2	14.8	15.4
85°	7.6	7.4	7.5	7.3	7.0
87.5°	2.7	2.8	2.8	2.7	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)