

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: P589990

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589990
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-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

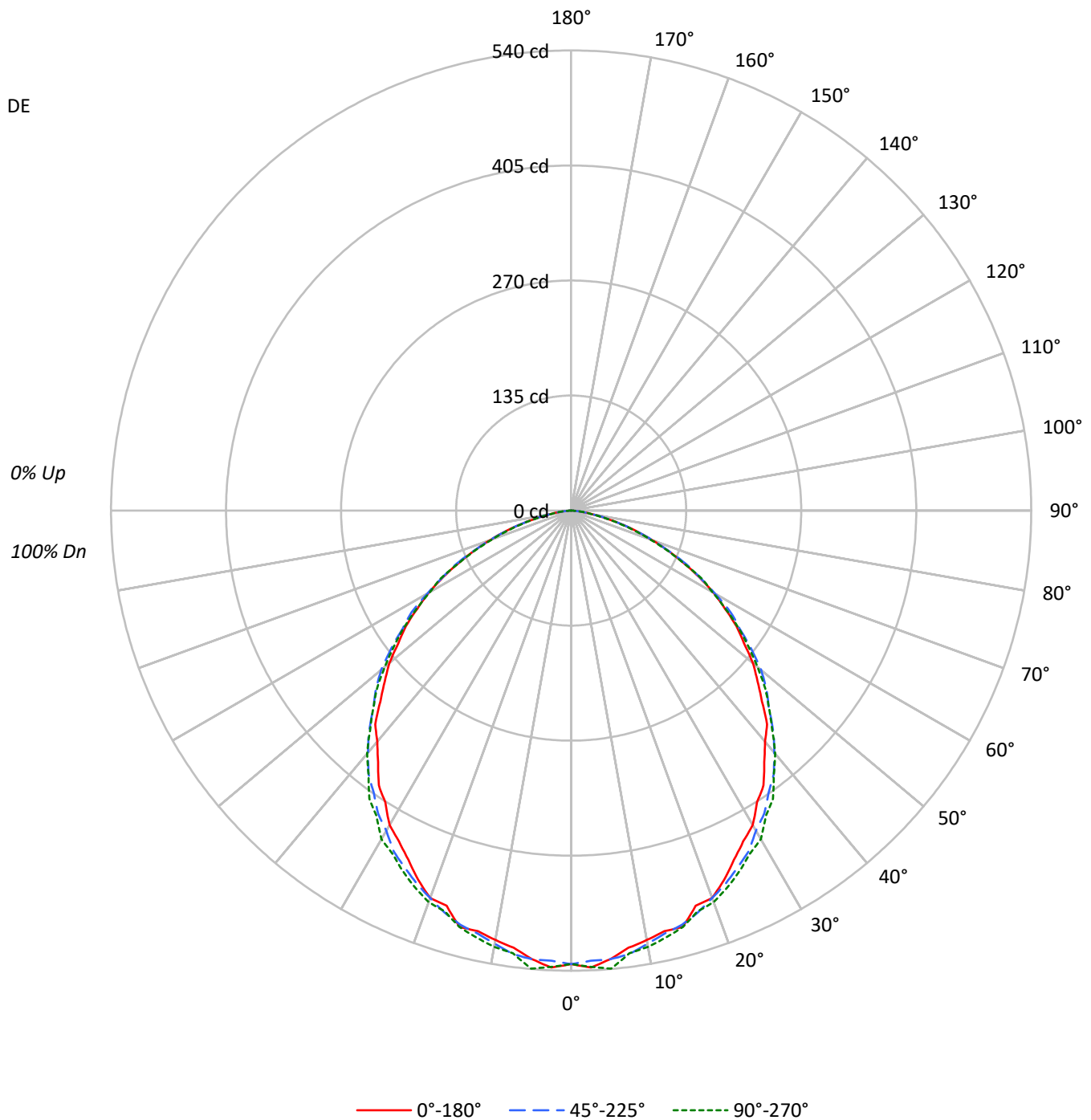
Lumens per Lamp: N/A
Luminaire Lumens: 1341.0 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	35	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°	1432	1432	1432
5°	1427	1428	1458
10°	1398	1410	1420
15°	1409	1402	1409
20°	1385	1385	1400
25°	1343	1372	1387
30°	1324	1348	1383
35°	1293	1327	1357
40°	1243	1303	1309
45°	1205	1248	1250
50°	1165	1218	1195
55°	1110	1132	1124
60°	1039	1049	1030
65°	926	949	919
70°	795	797	775
75°	629	628	604
80°	422	409	394
85°	228	228	213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 1280 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.0	3.7
10°-20°	141.8	10.6
20°-30°	212.5	15.8
30°-40°	251.9	18.8
40°-50°	252.3	18.8
50°-60°	214.2	16.0
60°-70°	144.4	10.8
70°-80°	63.4	4.7
80°-90°	10.3	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°	404.4	30.2
0°-40°	656.3	48.9
0°-60°	1122.8	83.7
0°-90°	1341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1341.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	532	532	532	532	532	
5°	528	527	528	527	540	50
15°	506	500	503	506	506	141
25°	452	455	462	468	467	209
35°	394	395	404	413	413	244
45°	317	323	328	336	328	245
55°	237	235	241	240	240	211
65°	145	144	149	143	144	145
75°	60	59	60	56	58	65
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°	532.1	532.1	532.1	532.1	532.1
2.5°	536.7	532.6	528.8	533.2	535.9
5°	528.3	527.1	528.5	526.9	539.6
7.5°	517.4	522.2	524.9	523.2	524.0
10°	511.7	510.0	516.1	520.4	519.8
12.5°	505.5	508.0	508.3	512.9	513.3
15°	505.8	500.0	503.1	505.7	505.9
17.5°	486.2	492.5	494.6	500.6	493.2
20°	483.8	479.2	483.8	489.9	488.9
22.5°	469.0	463.9	473.7	479.2	478.8
25°	452.2	454.7	462.1	468.2	467.2
27.5°	437.5	440.4	451.0	459.3	454.0
30°	426.2	424.8	433.7	441.1	445.2
32.5°	405.9	411.2	421.6	429.0	425.0
35°	393.6	394.8	404.0	413.3	413.0
37.5°	372.1	377.6	390.4	393.0	390.6
40°	353.8	359.2	370.8	373.7	372.5
42.5°	340.3	341.2	351.2	354.4	349.3
45°	316.7	322.6	328.0	336.4	328.5
47.5°	296.6	299.4	310.9	313.2	309.0
50°	278.4	279.4	291.0	288.2	285.4
52.5°	255.6	259.6	266.1	265.6	262.4
55°	236.7	235.2	241.3	239.7	239.6
57.5°	214.1	216.9	222.0	219.4	215.2
60°	193.0	193.0	194.9	191.9	191.4
62.5°	169.4	170.2	170.6	167.0	172.9
65°	145.4	143.5	149.1	143.4	144.4
67.5°	123.4	124.3	123.8	120.2	121.6
70°	101.0	102.2	101.3	97.3	98.5
72.5°	80.5	79.0	80.0	74.9	77.2
75°	60.5	59.3	60.4	56.1	58.1
77.5°	41.2	42.2	41.5	39.2	40.5
80°	27.2	26.4	26.4	25.1	25.4
82.5°	15.9	15.1	14.9	14.5	15.1
85°	7.4	7.2	7.4	7.1	6.9
87.5°	2.7	2.7	2.7	2.6	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)