

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: P590601

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590601
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-LD4-3LO-50-UNV-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

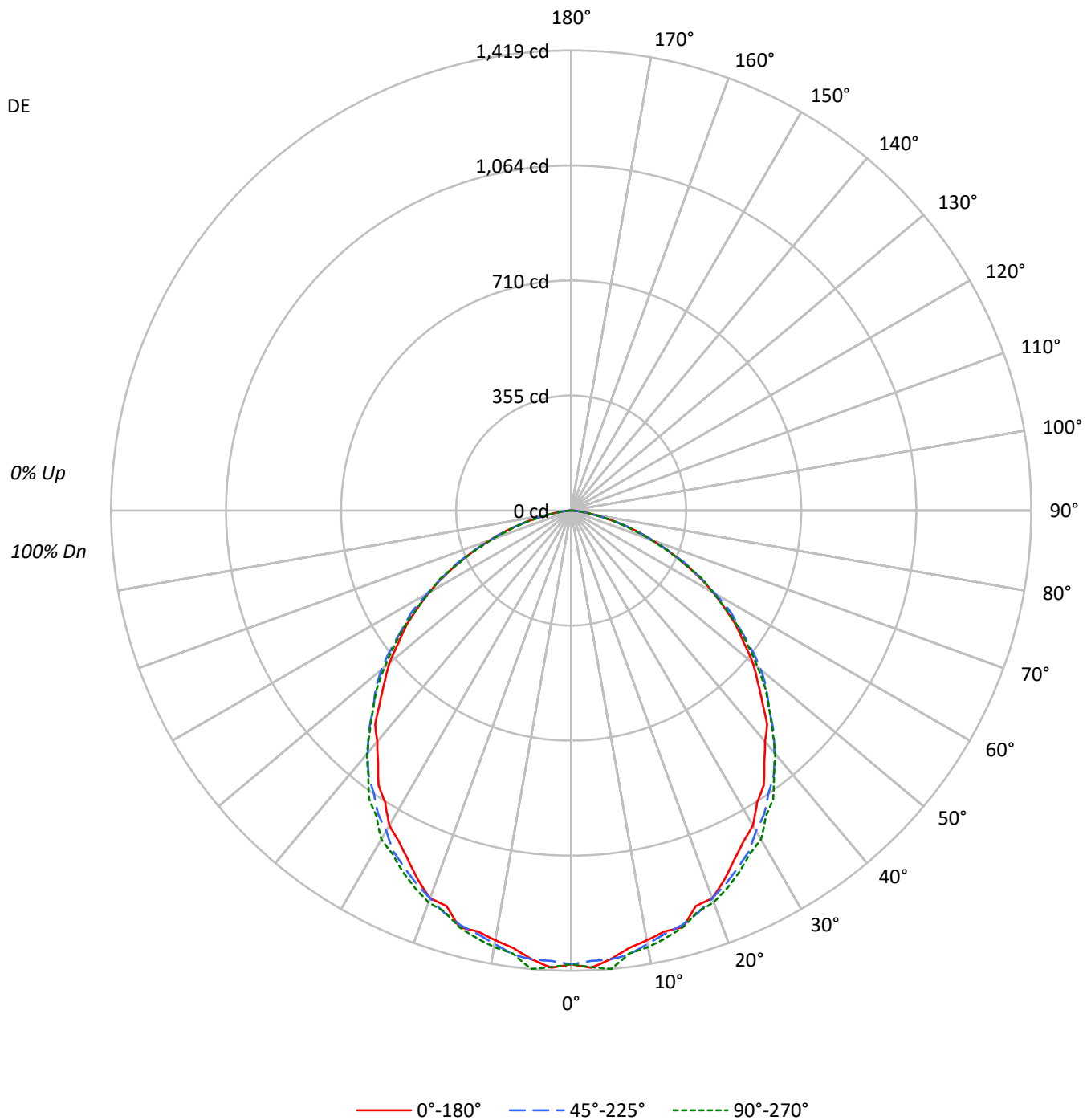
Lumens per Lamp: N/A
Luminaire Lumens: 3526.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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	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									100																			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86									86																			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73									73																			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62									62																			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53									53																			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46									46																			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41									41																			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36									36																			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32									32																			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29									29																			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26									26																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3765	3765	3765
5°	3752	3754	3833
10°	3676	3708	3734
15°	3705	3685	3706
20°	3643	3643	3682
25°	3531	3608	3648
30°	3482	3544	3638
35°	3400	3489	3568
40°	3268	3425	3440
45°	3169	3282	3287
50°	3065	3203	3142
55°	2921	2977	2956
60°	2731	2758	2709
65°	2435	2497	2418
70°	2089	2096	2038
75°	1654	1651	1587
80°	1108	1077	1035
85°	602	596	559

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3366 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.6	3.7
10°-20°	373.0	10.6
20°-30°	558.8	15.8
30°-40°	662.3	18.8
40°-50°	663.5	18.8
50°-60°	563.2	16.0
60°-70°	379.7	10.8
70°-80°	166.8	4.7
80°-90°	27.1	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°	1063.4	30.2
0°-40°	1725.6	48.9
0°-60°	2952.3	83.7
0°-90°	3526.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3526.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1399	1399	1399	1399	1399	
5°	1389	1386	1390	1386	1419	131
15°	1330	1315	1323	1330	1330	371
25°	1189	1196	1215	1231	1228	550
35°	1035	1038	1062	1087	1086	643
45°	833	848	862	885	864	644
55°	622	618	635	630	630	554
65°	382	377	392	377	380	380
75°	159	156	159	148	153	171
85°	20	19	19	19	18	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1399.0	1399.0	1399.0	1399.0	1399.0
2.5°	1411.1	1400.5	1390.5	1402.1	1409.1
5°	1389.1	1385.8	1389.6	1385.5	1418.9
7.5°	1360.6	1373.0	1380.2	1375.7	1377.7
10°	1345.4	1341.0	1357.1	1368.3	1366.7
12.5°	1329.1	1335.6	1336.5	1348.6	1349.7
15°	1330.0	1314.7	1322.8	1329.7	1330.2
17.5°	1278.4	1295.0	1300.6	1316.3	1296.8
20°	1272.0	1259.9	1272.0	1288.1	1285.6
22.5°	1233.2	1219.7	1245.7	1259.9	1259.0
25°	1189.1	1195.6	1215.1	1231.0	1228.5
27.5°	1150.5	1158.1	1185.9	1207.7	1193.6
30°	1120.7	1116.9	1140.4	1159.9	1170.7
32.5°	1067.4	1081.1	1108.6	1127.9	1117.6
35°	1035.0	1038.1	1062.1	1086.7	1086.0
37.5°	978.5	992.8	1026.6	1033.4	1027.1
40°	930.3	944.5	975.1	982.5	979.4
42.5°	894.7	897.2	923.4	931.9	918.4
45°	832.7	848.3	862.4	884.6	863.6
47.5°	780.0	787.2	817.6	823.5	812.5
50°	732.1	734.6	765.2	757.8	750.5
52.5°	672.0	682.6	699.8	698.3	689.8
55°	622.5	618.3	634.6	630.2	630.1
57.5°	563.0	570.3	583.6	576.8	565.8
60°	507.4	507.6	512.5	504.7	503.3
62.5°	445.4	447.6	448.7	439.1	454.7
65°	382.4	377.3	392.2	377.2	379.7
67.5°	324.4	327.0	325.5	316.1	319.7
70°	265.5	268.8	266.4	255.8	259.0
72.5°	211.7	207.7	210.3	196.9	203.0
75°	159.1	155.9	158.8	147.6	152.6
77.5°	108.4	110.9	109.1	103.1	106.6
80°	71.5	69.5	69.5	66.1	66.8
82.5°	41.7	39.7	39.2	38.1	39.7
85°	19.5	19.0	19.3	18.8	18.1
87.5°	7.0	7.2	7.2	6.9	6.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)