

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: P590249

Luminaire Tested: FSR-24-2-LD4-2LO-35-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590249
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-LD4-2LO-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

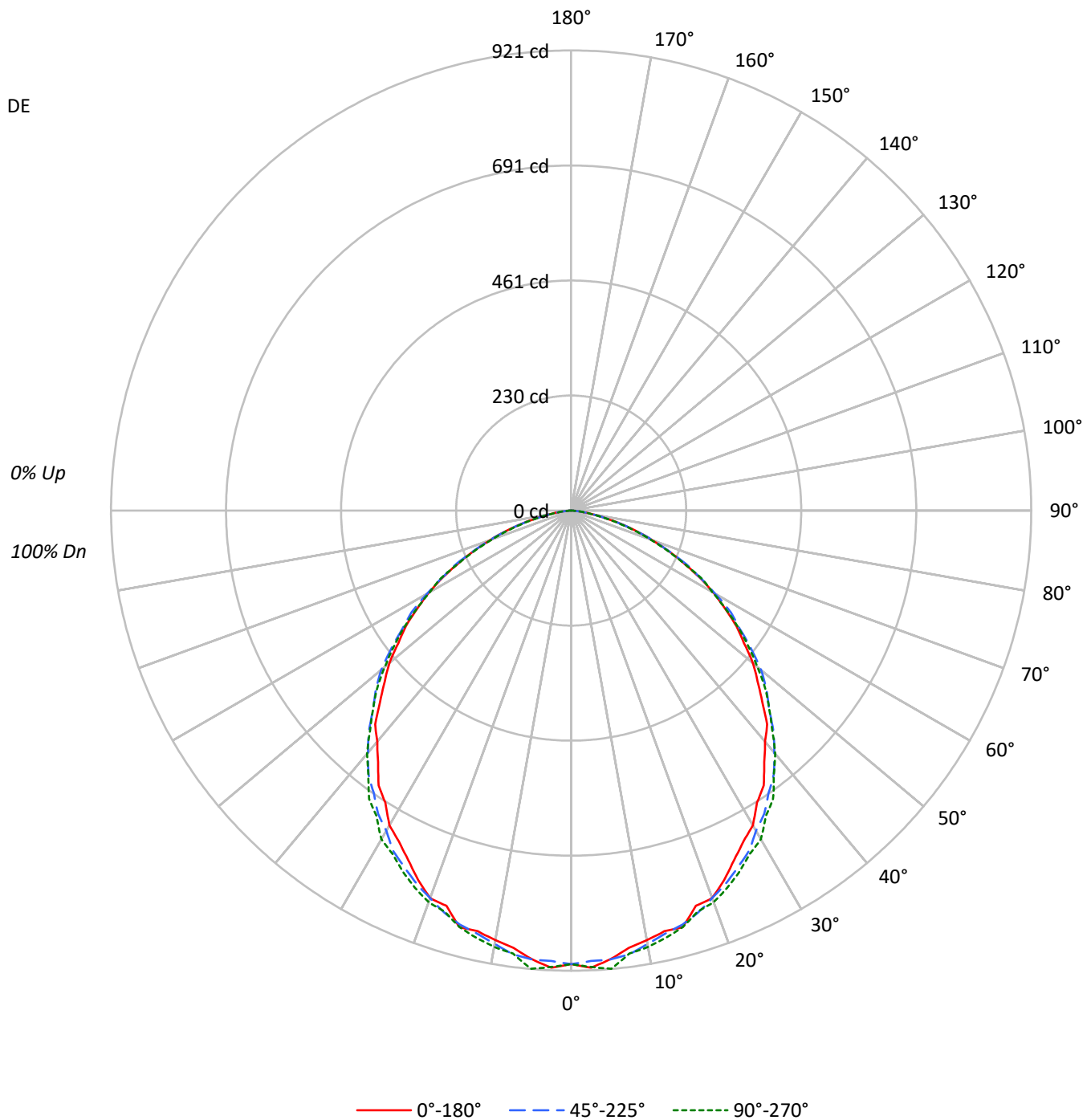
Lumens per Lamp: N/A
Luminaire Lumens: 2288.0 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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																		
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																												
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°	2443	2443	2443
5°	2435	2436	2487
10°	2385	2406	2423
15°	2404	2391	2405
20°	2364	2364	2389
25°	2291	2341	2367
30°	2260	2299	2361
35°	2206	2264	2315
40°	2121	2223	2232
45°	2057	2130	2133
50°	1989	2079	2039
55°	1895	1932	1918
60°	1772	1790	1758
65°	1580	1621	1569
70°	1356	1360	1323
75°	1074	1071	1029
80°	719	699	673
85°	392	386	361

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2184 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.4	3.7
10°-20°	242.0	10.6
20°-30°	362.6	15.8
30°-40°	429.7	18.8
40°-50°	430.5	18.8
50°-60°	365.5	16.0
60°-70°	246.4	10.8
70°-80°	108.3	4.7
80°-90°	17.6	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°	690.0	30.2
0°-40°	1119.7	48.9
0°-60°	1915.7	83.7
0°-90°	2288.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2288.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	908	908	908	908	908	
5°	901	899	902	899	921	85
15°	863	853	858	863	863	240
25°	772	776	788	799	797	357
35°	672	674	689	705	705	417
45°	540	550	560	574	560	418
55°	404	401	412	409	409	359
65°	248	245	254	245	246	247
75°	103	101	103	96	99	111
85°	13	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°	907.8	907.8	907.8	907.8	907.8
2.5°	915.7	908.8	902.3	909.8	914.4
5°	901.4	899.3	901.7	899.0	920.7
7.5°	882.9	890.9	895.6	892.7	894.0
10°	873.0	870.2	880.6	887.9	886.8
12.5°	862.5	866.7	867.3	875.1	875.8
15°	863.0	853.1	858.4	862.8	863.2
17.5°	829.5	840.3	843.9	854.1	841.5
20°	825.4	817.6	825.4	835.9	834.2
22.5°	800.2	791.4	808.3	817.6	817.0
25°	771.6	775.8	788.5	798.8	797.2
27.5°	746.5	751.5	769.5	783.7	774.5
30°	727.2	724.7	740.0	752.6	759.7
32.5°	692.6	701.5	719.3	731.9	725.2
35°	671.6	673.6	689.2	705.2	704.7
37.5°	634.9	644.2	666.1	670.6	666.5
40°	603.7	612.9	632.7	637.5	635.5
42.5°	580.6	582.2	599.2	604.7	595.9
45°	540.4	550.4	559.6	574.0	560.4
47.5°	506.1	510.8	530.5	534.4	527.2
50°	475.1	476.7	496.5	491.7	487.0
52.5°	436.0	443.0	454.1	453.1	447.6
55°	403.9	401.2	411.8	409.0	408.8
57.5°	365.4	370.0	378.7	374.3	367.1
60°	329.3	329.4	332.5	327.5	326.6
62.5°	289.0	290.5	291.2	284.9	295.0
65°	248.1	244.9	254.5	244.7	246.4
67.5°	210.5	212.2	211.2	205.1	207.5
70°	172.3	174.4	172.9	166.0	168.1
72.5°	137.4	134.8	136.4	127.8	131.7
75°	103.3	101.2	103.0	95.8	99.0
77.5°	70.3	72.0	70.8	66.9	69.2
80°	46.4	45.1	45.1	42.9	43.4
82.5°	27.1	25.8	25.4	24.7	25.8
85°	12.7	12.3	12.5	12.2	11.7
87.5°	4.6	4.7	4.7	4.5	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)