

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: P562775

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562775
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2LO-40-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

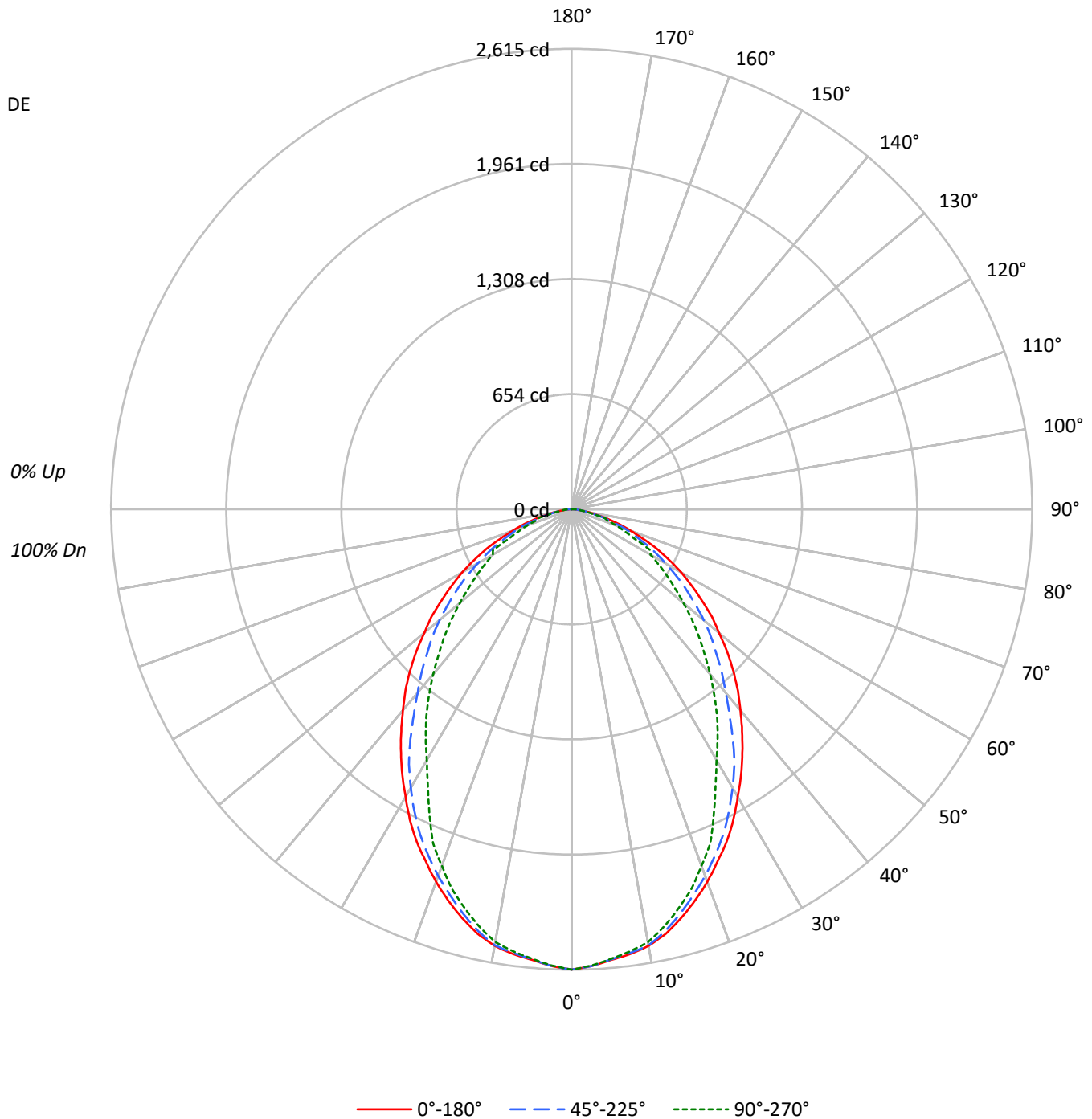
Lumens per Lamp: N/A
Luminaire Lumens: 5133.0 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3518	3518	3518
5°	3470	3466	3462
10°	3440	3436	3411
15°	3347	3314	3267
20°	3225	3173	3086
25°	3092	3025	2836
30°	2930	2836	2555
35°	2775	2621	2363
40°	2617	2389	2150
45°	2468	2209	1944
50°	2284	2050	1734
55°	2113	1858	1553
60°	1936	1659	1391
65°	1703	1453	1232
70°	1403	1272	1046
75°	1116	974	1022
80°	749	703	656
85°	466	560	653

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2468 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.4	4.7
10°-20°	668.0	13.0
20°-30°	924.8	18.0
30°-40°	986.1	19.2
40°-50°	899.6	17.5
50°-60°	704.7	13.7
60°-70°	459.3	8.9
70°-80°	203.5	4.0
80°-90°	43.7	0.9
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°	1836.1	35.8
0°-40°	2822.2	55.0
0°-60°	4426.5	86.2
0°-90°	5133.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5133.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2615	2615	2615	2615	2615	
5°	2569	2566	2566	2563	2563	244
15°	2403	2403	2379	2355	2346	676
25°	2083	2071	2037	1965	1910	956
35°	1690	1678	1596	1475	1439	1056
45°	1297	1270	1161	1064	1022	999
55°	901	874	792	698	662	808
65°	535	505	456	466	387	527
75°	215	200	187	178	196	230
85°	30	33	36	39	42	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2614.7	2614.7	2614.7	2614.7	2614.7
2.5°	2596.5	2596.5	2596.5	2593.5	2593.5
5°	2569.3	2566.3	2566.3	2563.3	2563.3
7.5°	2548.2	2545.2	2542.1	2539.1	2533.1
10°	2518.0	2518.0	2514.9	2499.8	2496.8
12.5°	2469.6	2466.6	2454.5	2433.3	2427.3
15°	2403.1	2403.1	2378.9	2354.7	2345.7
17.5°	2330.5	2327.5	2297.3	2273.1	2261.0
20°	2252.0	2245.9	2215.7	2176.4	2155.2
22.5°	2164.3	2164.3	2128.0	2076.6	2055.5
25°	2082.7	2070.6	2037.3	1964.8	1910.4
27.5°	1989.0	1970.8	1934.6	1831.8	1768.3
30°	1886.2	1877.1	1825.7	1692.7	1644.4
32.5°	1789.5	1774.4	1719.9	1580.9	1541.6
35°	1689.7	1677.6	1596.0	1475.1	1438.8
37.5°	1590.0	1574.9	1472.1	1375.4	1330.0
40°	1490.2	1472.1	1360.2	1272.6	1224.2
42.5°	1396.5	1372.3	1263.5	1169.8	1115.4
45°	1296.8	1269.6	1160.7	1064.0	1021.7
47.5°	1197.0	1172.8	1073.1	973.3	925.0
50°	1091.2	1070.1	979.4	879.6	828.2
52.5°	1003.6	970.3	882.6	782.9	740.6
55°	900.8	873.6	792.0	698.3	662.0
57.5°	807.1	779.9	704.3	616.6	586.4
60°	719.4	680.1	616.6	541.1	516.9
62.5°	622.7	592.5	538.1	474.6	504.8
65°	535.0	504.8	456.4	465.5	386.9
67.5°	438.3	423.2	380.9	338.5	326.5
70°	356.7	338.5	323.4	278.1	266.0
72.5°	284.1	266.0	244.8	220.7	211.6
75°	214.6	199.5	187.4	178.3	196.5
77.5°	148.1	142.1	133.0	123.9	120.9
80°	96.7	93.7	90.7	87.7	84.6
82.5°	57.4	57.4	57.4	57.4	57.4
85°	30.2	33.3	36.3	39.3	42.3
87.5°	18.1	18.1	21.2	24.2	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)