

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: P563975

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563975
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-LD4-4LO-50-UNV-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

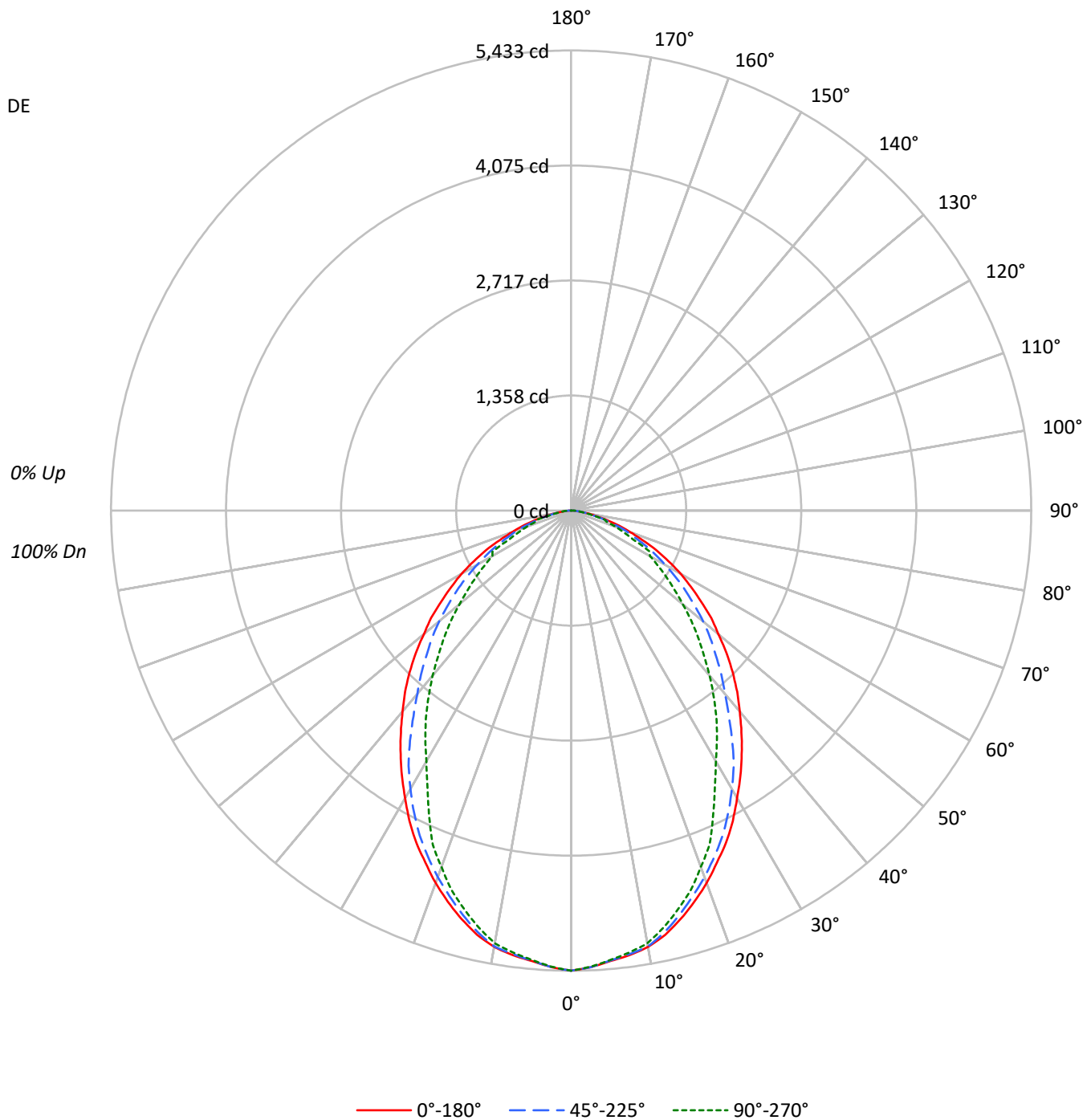
Lumens per Lamp: N/A
Luminaire Lumens: 10665.0 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7310	7310	7310
5°	7210	7202	7193
10°	7148	7139	7088
15°	6955	6885	6789
20°	6700	6592	6412
25°	6424	6284	5893
30°	6089	5894	5308
35°	5767	5447	4910
40°	5438	4964	4468
45°	5127	4589	4039
50°	4746	4259	3602
55°	4390	3860	3226
60°	4022	3448	2890
65°	3539	3019	2559
70°	2915	2644	2174
75°	2318	2024	2122
80°	1557	1460	1363
85°	969	1164	1357

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5127 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	505.7	4.7
10°-20°	1387.9	13.0
20°-30°	1921.4	18.0
30°-40°	2048.8	19.2
40°-50°	1869.1	17.5
50°-60°	1464.3	13.7
60°-70°	954.3	8.9
70°-80°	422.8	4.0
80°-90°	90.8	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°	3815.0	35.8
0°-40°	5863.7	55.0
0°-60°	9197.1	86.2
0°-90°	10665.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10665.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5433	5433	5433	5433	5433	
5°	5338	5332	5332	5326	5326	507
15°	4993	4993	4943	4892	4874	1404
25°	4327	4302	4233	4082	3969	1987
35°	3511	3486	3316	3065	2990	2195
45°	2694	2638	2412	2211	2123	2075
55°	1872	1815	1646	1451	1375	1679
65°	1112	1049	948	967	804	1096
75°	446	414	389	370	408	478
85°	63	69	75	82	88	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5432.6	5432.6	5432.6	5432.6	5432.6
2.5°	5394.9	5394.9	5394.9	5388.6	5388.6
5°	5338.4	5332.1	5332.1	5325.8	5325.8
7.5°	5294.4	5288.2	5281.9	5275.6	5263.0
10°	5231.6	5231.6	5225.4	5194.0	5187.7
12.5°	5131.1	5124.9	5099.7	5055.8	5043.2
15°	4993.0	4993.0	4942.7	4892.5	4873.6
17.5°	4842.2	4836.0	4773.2	4722.9	4697.8
20°	4679.0	4666.4	4603.6	4521.9	4478.0
22.5°	4496.8	4496.8	4421.5	4314.7	4270.7
25°	4327.2	4302.1	4233.0	4082.3	3969.3
27.5°	4132.6	4094.9	4019.5	3806.0	3674.1
30°	3919.0	3900.2	3793.4	3517.1	3416.6
32.5°	3718.0	3686.6	3573.6	3284.7	3203.0
35°	3510.8	3485.7	3316.1	3064.9	2989.5
37.5°	3303.5	3272.1	3058.6	2857.6	2763.4
40°	3096.3	3058.6	2826.2	2644.1	2543.6
42.5°	2901.6	2851.3	2625.2	2430.5	2317.5
45°	2694.3	2637.8	2411.7	2210.7	2122.8
47.5°	2487.1	2436.8	2229.6	2022.3	1921.8
50°	2267.3	2223.3	2034.9	1827.6	1720.8
52.5°	2085.1	2016.0	1833.9	1626.6	1538.7
55°	1871.6	1815.1	1645.5	1450.8	1375.4
57.5°	1676.9	1620.4	1463.4	1281.2	1218.4
60°	1494.8	1413.1	1281.2	1124.2	1074.0
62.5°	1293.8	1231.0	1117.9	986.0	1048.8
65°	1111.6	1048.8	948.4	967.2	803.9
67.5°	910.7	879.3	791.3	703.4	678.3
70°	741.1	703.4	672.0	577.8	552.7
72.5°	590.4	552.7	508.7	458.5	439.6
75°	445.9	414.5	389.4	370.5	408.2
77.5°	307.7	295.2	276.3	257.5	251.2
80°	201.0	194.7	188.4	182.1	175.9
82.5°	119.3	119.3	119.3	119.3	119.3
85°	62.8	69.1	75.4	81.6	87.9
87.5°	37.7	37.7	44.0	50.2	56.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)