

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: P562518

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562518
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-LD4-2HI-35-UNV-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

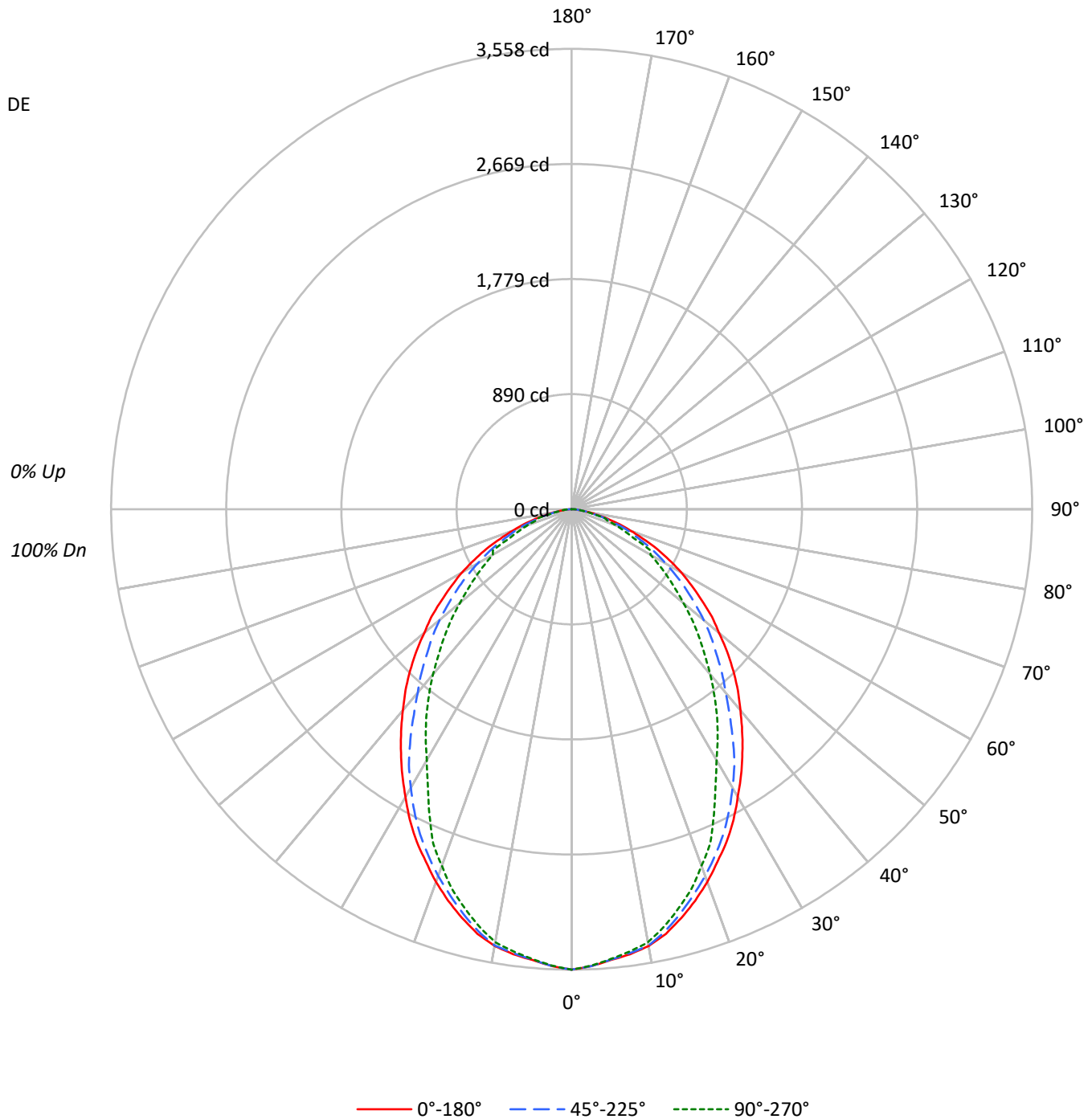
Lumens per Lamp: N/A
Luminaire Lumens: 6985.0 lumens
Efficiency: N/A
Efficacy: 80.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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									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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87												87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75												75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65												65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56												56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50												50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44												44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40												40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36												36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33												33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30												30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4787	4787	4787
5°	4722	4717	4711
10°	4681	4676	4642
15°	4555	4509	4446
20°	4388	4317	4199
25°	4207	4116	3859
30°	3988	3860	3477
35°	3777	3567	3216
40°	3562	3251	2926
45°	3358	3005	2645
50°	3108	2790	2359
55°	2875	2528	2113
60°	2634	2258	1893
65°	2318	1977	1676
70°	1910	1731	1424
75°	1518	1326	1390
80°	1020	956	893
85°	634	763	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3358 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	331.2	4.7
10°-20°	909.0	13.0
20°-30°	1258.4	18.0
30°-40°	1341.8	19.2
40°-50°	1224.1	17.5
50°-60°	959.0	13.7
60°-70°	625.0	8.9
70°-80°	276.9	4.0
80°-90°	59.5	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°	2498.6	35.8
0°-40°	3840.4	55.0
0°-60°	6023.6	86.2
0°-90°	6985.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6985.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3558	3558	3558	3558	3558	
5°	3496	3492	3492	3488	3488	332
15°	3270	3270	3237	3204	3192	919
25°	2834	2818	2772	2674	2600	1301
35°	2299	2283	2172	2007	1958	1438
45°	1765	1728	1580	1448	1390	1359
55°	1226	1189	1078	950	901	1099
65°	728	687	621	634	526	718
75°	292	272	255	243	267	313
85°	41	45	49	54	58	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3558.1	3558.1	3558.1	3558.1	3558.1
2.5°	3533.4	3533.4	3533.4	3529.3	3529.3
5°	3496.4	3492.3	3492.3	3488.1	3488.1
7.5°	3467.6	3463.5	3459.3	3455.2	3447.0
10°	3426.4	3426.4	3422.3	3401.8	3397.6
12.5°	3360.6	3356.5	3340.1	3311.3	3303.0
15°	3270.1	3270.1	3237.2	3204.3	3192.0
17.5°	3171.4	3167.3	3126.2	3093.3	3076.8
20°	3064.5	3056.2	3015.1	2961.6	2932.8
22.5°	2945.2	2945.2	2895.8	2825.9	2797.1
25°	2834.1	2817.7	2772.4	2673.7	2599.7
27.5°	2706.6	2681.9	2632.6	2492.7	2406.3
30°	2566.7	2554.4	2484.5	2303.5	2237.7
32.5°	2435.1	2414.5	2340.5	2151.3	2097.8
35°	2299.4	2282.9	2171.9	2007.3	1958.0
37.5°	2163.6	2143.1	2003.2	1871.6	1809.9
40°	2027.9	2003.2	1851.0	1731.7	1665.9
42.5°	1900.4	1867.5	1719.4	1591.9	1517.8
45°	1764.6	1727.6	1579.5	1447.9	1390.3
47.5°	1628.9	1596.0	1460.2	1324.5	1258.7
50°	1484.9	1456.1	1332.7	1197.0	1127.1
52.5°	1365.6	1320.4	1201.1	1065.4	1007.8
55°	1225.8	1188.8	1077.7	950.2	900.8
57.5°	1098.3	1061.2	958.4	839.1	798.0
60°	979.0	925.5	839.1	736.3	703.4
62.5°	847.4	806.2	732.2	645.8	686.9
65°	728.1	686.9	621.1	633.5	526.5
67.5°	596.4	575.9	518.3	460.7	444.2
70°	485.4	460.7	440.1	378.4	362.0
72.5°	386.7	362.0	333.2	300.3	287.9
75°	292.0	271.5	255.0	242.7	267.4
77.5°	201.6	193.3	181.0	168.6	164.5
80°	131.6	127.5	123.4	119.3	115.2
82.5°	78.2	78.2	78.2	78.2	78.2
85°	41.1	45.2	49.4	53.5	57.6
87.5°	24.7	24.7	28.8	32.9	37.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)