

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: P562773

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562773
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-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5305.0 lumens
Efficiency: N/A
Efficacy: 113.4 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

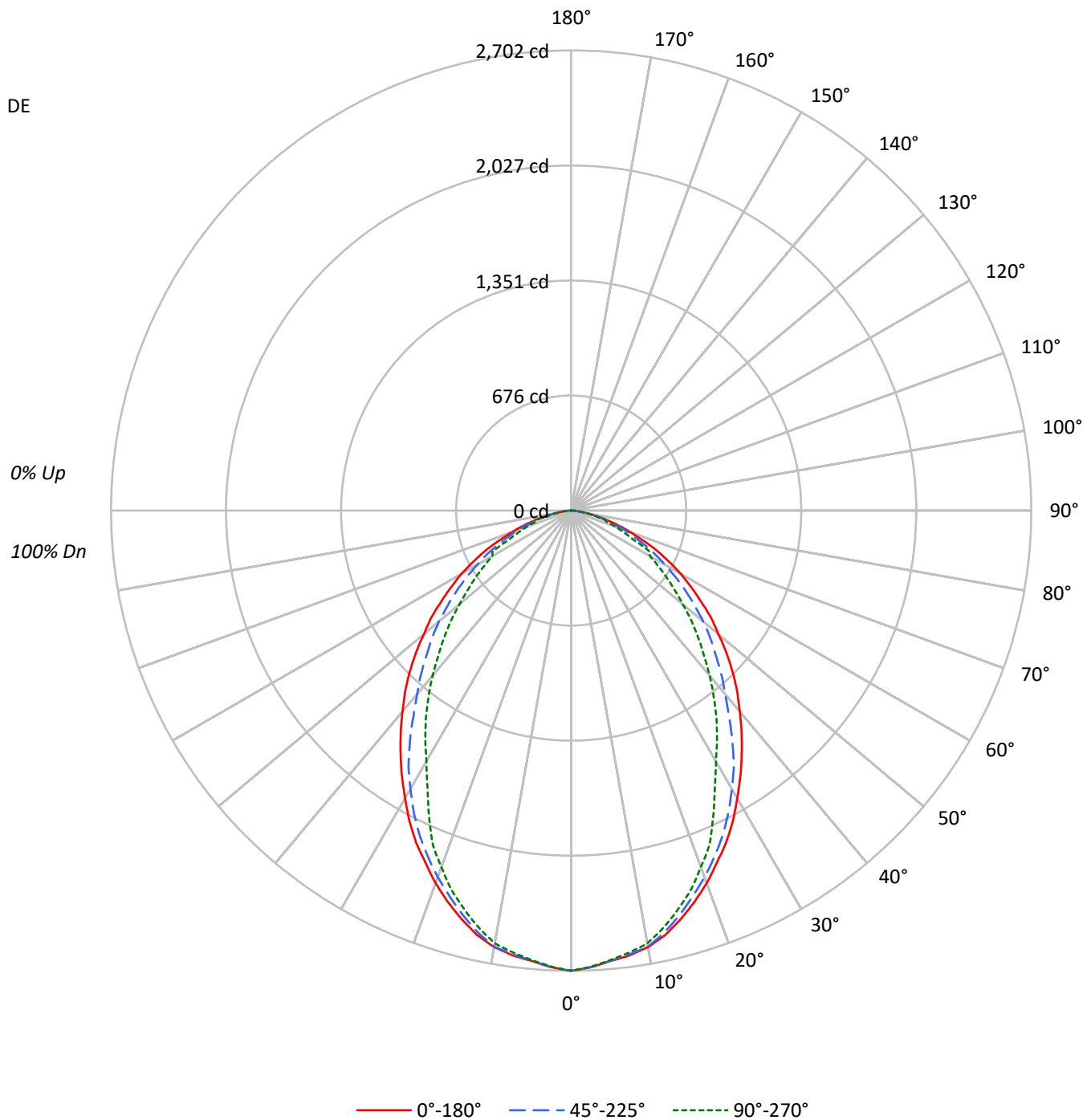
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	3636	3636	3636
5°	3586	3582	3578
10°	3555	3551	3526
15°	3460	3425	3377
20°	3332	3279	3189
25°	3196	3126	2931
30°	3029	2932	2640
35°	2868	2709	2442
40°	2705	2469	2222
45°	2550	2283	2009
50°	2361	2119	1792
55°	2184	1920	1605
60°	2001	1715	1438
65°	1761	1502	1273
70°	1450	1315	1081
75°	1153	1007	1056
80°	775	726	678
85°	482	579	675

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2550 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.5	4.7
10°-20°	690.3	13.0
20°-30°	955.7	18.0
30°-40°	1019.1	19.2
40°-50°	929.7	17.5
50°-60°	728.4	13.7
60°-70°	474.7	8.9
70°-80°	210.3	4.0
80°-90°	45.2	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°	1897.6	35.8
0°-40°	2916.7	55.0
0°-60°	4574.8	86.2
0°-90°	5305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5305.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2702	2702	2702	2702	2702	
5°	2655	2652	2652	2649	2649	252
15°	2484	2484	2459	2434	2424	698
25°	2152	2140	2106	2031	1974	988
35°	1746	1734	1650	1524	1487	1092
45°	1340	1312	1200	1100	1056	1032
55°	931	903	818	722	684	835
65°	553	522	472	481	400	545
75°	222	206	194	184	203	238
85°	31	34	38	41	44	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2702.3	2702.3	2702.3	2702.3	2702.3
2.5°	2683.6	2683.6	2683.6	2680.4	2680.4
5°	2655.4	2652.3	2652.3	2649.2	2649.2
7.5°	2633.6	2630.4	2627.3	2624.2	2617.9
10°	2602.3	2602.3	2599.2	2583.6	2580.5
12.5°	2552.3	2549.2	2536.7	2514.9	2508.6
15°	2483.6	2483.6	2458.6	2433.6	2424.3
17.5°	2408.6	2405.5	2374.3	2349.3	2336.8
20°	2327.4	2321.2	2289.9	2249.3	2227.4
22.5°	2236.8	2236.8	2199.3	2146.2	2124.3
25°	2152.5	2140.0	2105.6	2030.6	1974.4
27.5°	2055.6	2036.9	1999.4	1893.2	1827.6
30°	1949.4	1940.0	1886.9	1749.5	1699.5
32.5°	1849.4	1833.8	1777.6	1633.9	1593.3
35°	1746.3	1733.8	1649.5	1524.5	1487.0
37.5°	1643.2	1627.6	1521.4	1421.4	1374.6
40°	1540.2	1521.4	1405.8	1315.2	1265.2
42.5°	1443.3	1418.3	1305.8	1209.0	1152.8
45°	1340.2	1312.1	1199.6	1099.7	1055.9
47.5°	1237.1	1212.1	1109.0	1005.9	956.0
50°	1127.8	1105.9	1012.2	909.1	856.0
52.5°	1037.2	1002.8	912.2	809.1	765.4
55°	931.0	902.8	818.5	721.7	684.2
57.5°	834.1	806.0	727.9	637.3	606.1
60°	743.5	702.9	637.3	559.2	534.2
62.5°	643.6	612.3	556.1	490.5	521.7
65°	553.0	521.7	471.7	481.1	399.9
67.5°	453.0	437.4	393.6	349.9	337.4
70°	368.6	349.9	334.3	287.4	274.9
72.5°	293.7	274.9	253.0	228.1	218.7
75°	221.8	206.2	193.7	184.3	203.1
77.5°	153.1	146.8	137.5	128.1	125.0
80°	100.0	96.8	93.7	90.6	87.5
82.5°	59.4	59.4	59.4	59.4	59.4
85°	31.2	34.4	37.5	40.6	43.7
87.5°	18.7	18.7	21.9	25.0	28.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)