

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: P563892

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563892
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-40-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9586.0 lumens
Efficiency: N/A
Efficacy: 102.4 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

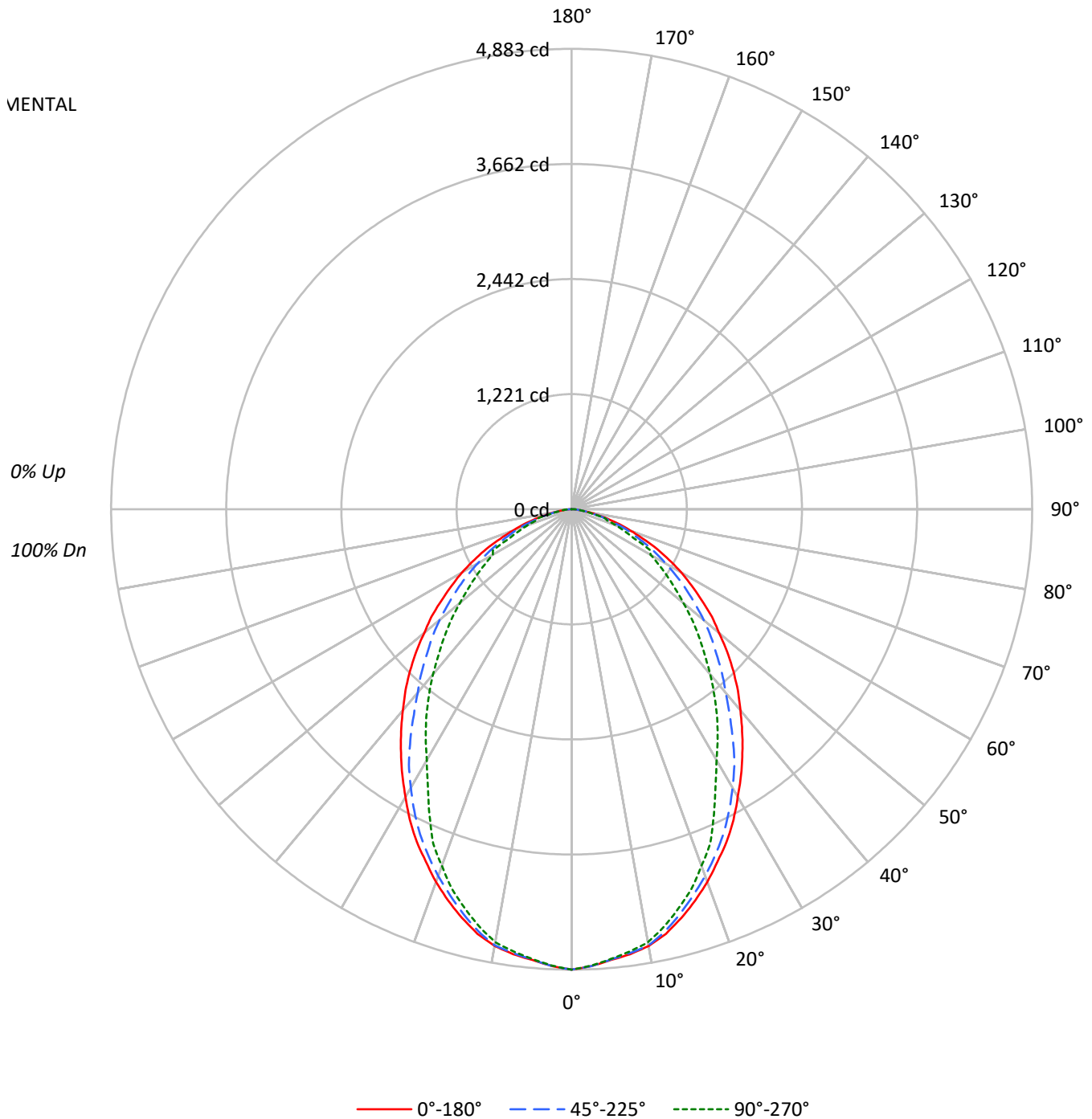
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6570	6570	6570
5°	6481	6473	6465
10°	6424	6417	6371
15°	6251	6188	6102
20°	6022	5925	5763
25°	5774	5649	5297
30°	5473	5297	4771
35°	5183	4896	4414
40°	4888	4462	4016
45°	4608	4125	3631
50°	4266	3828	3238
55°	3946	3469	2900
60°	3615	3099	2598
65°	3181	2714	2301
70°	2620	2376	1954
75°	2084	1820	1907
80°	1399	1313	1225
85°	872	1045	1220

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4608 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	454.5	4.7
10°-20°	1247.4	13.0
20°-30°	1727.0	18.0
30°-40°	1841.5	19.2
40°-50°	1680.0	17.5
50°-60°	1316.1	13.7
60°-70°	857.8	8.9
70°-80°	380.0	4.0
80°-90°	81.6	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°	3429.0	35.8
0°-40°	5270.5	55.0
0°-60°	8266.6	86.2
0°-90°	9586.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9586.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4883	4883	4883	4883	4883	
5°	4798	4793	4793	4787	4787	455
15°	4488	4488	4443	4398	4381	1262
25°	3889	3867	3805	3669	3568	1786
35°	3156	3133	2981	2755	2687	1973
45°	2422	2371	2168	1987	1908	1865
55°	1682	1631	1479	1304	1236	1509
65°	999	943	852	869	723	985
75°	401	373	350	333	367	430
85°	56	62	68	73	79	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4883.0	4883.0	4883.0	4883.0	4883.0
2.5°	4849.1	4849.1	4849.1	4843.5	4843.5
5°	4798.3	4792.7	4792.7	4787.0	4787.0
7.5°	4758.8	4753.1	4747.5	4741.9	4730.6
10°	4702.3	4702.3	4696.7	4668.5	4662.8
12.5°	4612.0	4606.4	4583.8	4544.3	4533.0
15°	4487.8	4487.8	4442.7	4397.5	4380.6
17.5°	4352.3	4346.7	4290.2	4245.1	4222.5
20°	4205.6	4194.3	4137.8	4064.4	4024.9
22.5°	4041.9	4041.9	3974.1	3878.2	3838.6
25°	3889.4	3866.9	3804.8	3669.3	3567.7
27.5°	3714.5	3680.6	3612.8	3420.9	3302.4
30°	3522.5	3505.6	3409.6	3161.2	3070.9
32.5°	3341.9	3313.7	3212.0	2952.4	2879.0
35°	3155.6	3133.0	2980.6	2754.8	2687.1
37.5°	2969.3	2941.1	2749.1	2568.5	2483.8
40°	2783.0	2749.1	2540.3	2376.6	2286.3
42.5°	2608.0	2562.9	2359.6	2184.6	2083.0
45°	2421.7	2370.9	2167.7	1987.1	1908.0
47.5°	2235.4	2190.3	2004.0	1817.7	1727.4
50°	2037.9	1998.4	1829.0	1642.7	1546.7
52.5°	1874.2	1812.1	1648.4	1462.1	1383.0
55°	1682.2	1631.4	1479.0	1304.0	1236.3
57.5°	1507.2	1456.4	1315.3	1151.6	1095.1
60°	1343.5	1270.1	1151.6	1010.5	965.3
62.5°	1162.9	1106.4	1004.8	886.3	942.7
65°	999.2	942.7	852.4	869.3	722.6
67.5°	818.5	790.3	711.3	632.2	609.7
70°	666.1	632.2	604.0	519.3	496.8
72.5°	530.6	496.8	457.3	412.1	395.2
75°	400.8	372.6	350.0	333.1	366.9
77.5°	276.6	265.3	248.4	231.4	225.8
80°	180.6	175.0	169.4	163.7	158.1
82.5°	107.3	107.3	107.3	107.3	107.3
85°	56.5	62.1	67.7	73.4	79.0
87.5°	33.9	33.9	39.5	45.2	50.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)