

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: P563828

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563828
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-35-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9452.0 lumens
Efficiency: N/A
Efficacy: 101.0 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

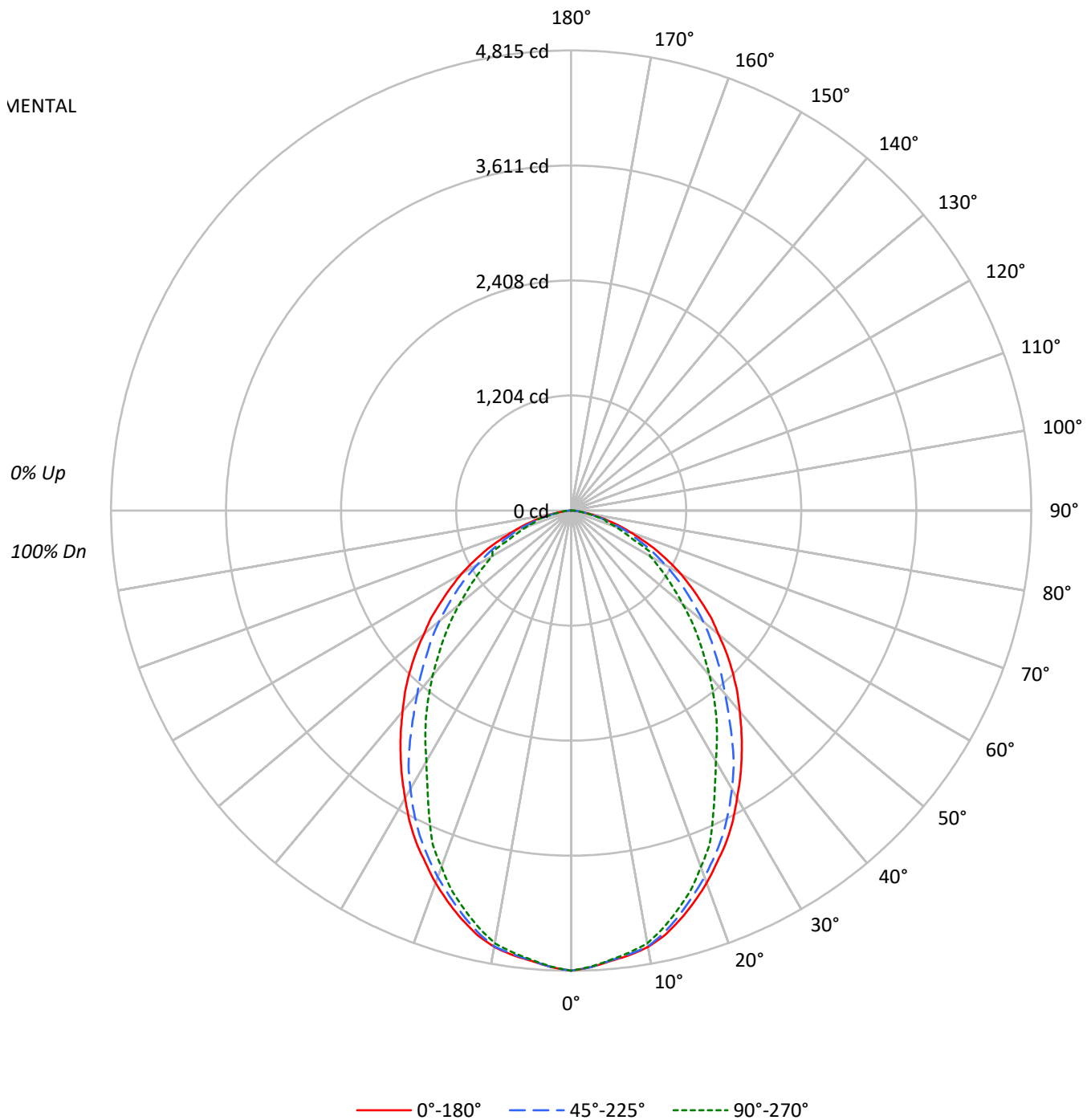
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6478	6478	6478
5°	6390	6383	6375
10°	6335	6327	6281
15°	6164	6102	6017
20°	5938	5842	5683
25°	5694	5570	5222
30°	5396	5223	4704
35°	5111	4827	4352
40°	4820	4399	3959
45°	4544	4067	3580
50°	4206	3775	3192
55°	3891	3421	2860
60°	3565	3056	2561
65°	3137	2676	2268
70°	2584	2343	1927
75°	2054	1794	1881
80°	1380	1294	1208
85°	860	1031	1203

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4544 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	448.2	4.7
10°-20°	1230.0	13.0
20°-30°	1702.9	18.0
30°-40°	1815.7	19.2
40°-50°	1656.5	17.5
50°-60°	1297.7	13.7
60°-70°	845.8	8.9
70°-80°	374.7	4.0
80°-90°	80.5	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°	3381.1	35.8
0°-40°	5196.8	55.0
0°-60°	8151.0	86.2
0°-90°	9452.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9452.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4815	4815	4815	4815	4815	
5°	4731	4726	4726	4720	4720	449
15°	4425	4425	4381	4336	4319	1244
25°	3835	3813	3752	3618	3518	1761
35°	3112	3089	2939	2716	2650	1945
45°	2388	2338	2137	1959	1881	1839
55°	1659	1609	1458	1286	1219	1488
65°	985	930	840	857	712	971
75°	395	367	345	328	362	424
85°	56	61	67	72	78	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4814.7	4814.7	4814.7	4814.7	4814.7
2.5°	4781.3	4781.3	4781.3	4775.8	4775.8
5°	4731.2	4725.7	4725.7	4720.1	4720.1
7.5°	4692.3	4686.7	4681.1	4675.6	4664.4
10°	4636.6	4636.6	4631.0	4603.2	4597.6
12.5°	4547.5	4542.0	4519.7	4480.8	4469.6
15°	4425.1	4425.1	4380.6	4336.0	4319.3
17.5°	4291.5	4285.9	4230.3	4185.7	4163.5
20°	4146.8	4135.7	4080.0	4007.6	3968.7
22.5°	3985.4	3985.4	3918.6	3823.9	3785.0
25°	3835.1	3812.8	3751.6	3618.0	3517.8
27.5°	3662.5	3629.1	3562.3	3373.1	3256.2
30°	3473.3	3456.6	3362.0	3117.0	3028.0
32.5°	3295.2	3267.3	3167.1	2911.1	2838.7
35°	3111.5	3089.2	2938.9	2716.3	2649.5
37.5°	2927.8	2900.0	2710.7	2532.6	2449.1
40°	2744.1	2710.7	2504.8	2343.4	2254.3
42.5°	2571.6	2527.0	2326.7	2154.1	2053.9
45°	2387.9	2337.8	2137.4	1959.3	1881.4
47.5°	2204.2	2159.7	1976.0	1792.3	1703.2
50°	2009.4	1970.4	1803.4	1619.8	1525.1
52.5°	1848.0	1786.7	1625.3	1441.6	1363.7
55°	1658.7	1608.6	1458.3	1285.8	1219.0
57.5°	1486.2	1436.1	1296.9	1135.5	1079.8
60°	1324.7	1252.4	1135.5	996.3	951.8
62.5°	1146.6	1091.0	990.8	873.9	929.5
65°	985.2	929.5	840.5	857.2	712.5
67.5°	807.1	779.3	701.3	623.4	601.1
70°	656.8	623.4	595.6	512.1	489.8
72.5°	523.2	489.8	450.9	406.3	389.6
75°	395.2	367.4	345.1	328.4	361.8
77.5°	272.7	261.6	244.9	228.2	222.6
80°	178.1	172.6	167.0	161.4	155.9
82.5°	105.8	105.8	105.8	105.8	105.8
85°	55.7	61.2	66.8	72.4	77.9
87.5°	33.4	33.4	39.0	44.5	50.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)