

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: P562548

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562548
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7873.0 lumens
Efficiency: N/A
Efficacy: 91.1 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

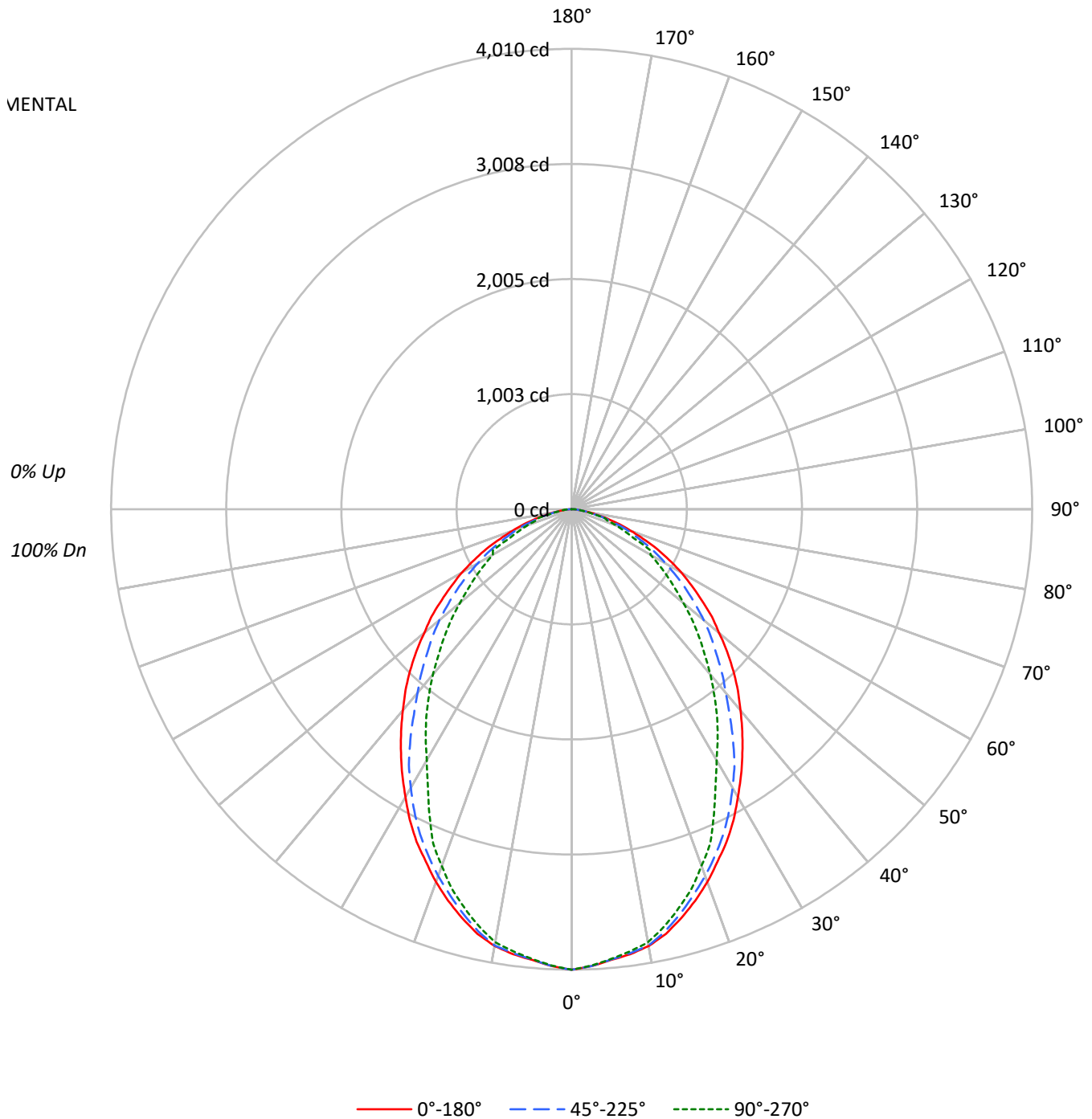
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5396	5396	5396
5°	5323	5316	5310
10°	5276	5270	5232
15°	5134	5083	5012
20°	4946	4866	4733
25°	4742	4639	4350
30°	4495	4351	3918
35°	4257	4021	3625
40°	4015	3664	3298
45°	3785	3388	2982
50°	3503	3144	2659
55°	3241	2849	2382
60°	2969	2545	2133
65°	2613	2229	1889
70°	2152	1952	1605
75°	1711	1495	1567
80°	1150	1078	1006
85°	716	858	1002

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3785 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.3	4.7
10°-20°	1024.5	13.0
20°-30°	1418.4	18.0
30°-40°	1512.4	19.2
40°-50°	1379.8	17.5
50°-60°	1080.9	13.7
60°-70°	704.5	8.9
70°-80°	312.1	4.0
80°-90°	67.0	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°	2816.2	35.8
0°-40°	4328.7	55.0
0°-60°	6789.4	86.2
0°-90°	7873.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7873.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4010	4010	4010	4010	4010	
5°	3941	3936	3936	3932	3932	374
15°	3686	3686	3649	3612	3598	1036
25°	3194	3176	3125	3014	2930	1467
35°	2592	2573	2448	2262	2207	1620
45°	1989	1947	1780	1632	1567	1532
55°	1382	1340	1215	1071	1015	1239
65°	821	774	700	714	593	809
75°	329	306	288	274	301	353
85°	46	51	56	60	65	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4010.4	4010.4	4010.4	4010.4	4010.4
2.5°	3982.6	3982.6	3982.6	3977.9	3977.9
5°	3940.9	3936.2	3936.2	3931.6	3931.6
7.5°	3908.4	3903.8	3899.1	3894.5	3885.2
10°	3862.0	3862.0	3857.4	3834.2	3829.6
12.5°	3787.9	3783.2	3764.7	3732.2	3723.0
15°	3685.9	3685.9	3648.8	3611.7	3597.8
17.5°	3574.6	3570.0	3523.6	3486.5	3468.0
20°	3454.0	3444.8	3398.4	3338.1	3305.7
22.5°	3319.6	3319.6	3264.0	3185.1	3152.7
25°	3194.4	3175.9	3124.9	3013.6	2930.1
27.5°	3050.7	3022.9	2967.2	2809.6	2712.2
30°	2893.1	2879.1	2800.3	2596.3	2522.1
32.5°	2744.7	2721.5	2638.1	2424.8	2364.5
35°	2591.7	2573.1	2448.0	2262.5	2206.9
37.5°	2438.7	2415.5	2257.9	2109.5	2040.0
40°	2285.7	2257.9	2086.3	1951.9	1877.7
42.5°	2142.0	2104.9	1938.0	1794.2	1710.8
45°	1989.0	1947.2	1780.3	1632.0	1567.1
47.5°	1836.0	1798.9	1645.9	1492.9	1418.7
50°	1673.7	1641.3	1502.2	1349.2	1270.3
52.5°	1539.3	1488.3	1353.8	1200.8	1135.9
55°	1381.6	1339.9	1214.7	1071.0	1015.4
57.5°	1237.9	1196.2	1080.3	945.8	899.4
60°	1103.4	1043.2	945.8	829.9	792.8
62.5°	955.1	908.7	825.3	727.9	774.3
65°	820.6	774.3	700.1	714.0	593.4
67.5°	672.3	649.1	584.2	519.3	500.7
70°	547.1	519.3	496.1	426.5	408.0
72.5°	435.8	408.0	375.5	338.5	324.5
75°	329.2	306.0	287.5	273.5	301.4
77.5°	227.2	217.9	204.0	190.1	185.5
80°	148.4	143.7	139.1	134.5	129.8
82.5°	88.1	88.1	88.1	88.1	88.1
85°	46.4	51.0	55.6	60.3	64.9
87.5°	27.8	27.8	32.5	37.1	41.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)