

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: P563699

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563699
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-LD4-4HI-40-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18954.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

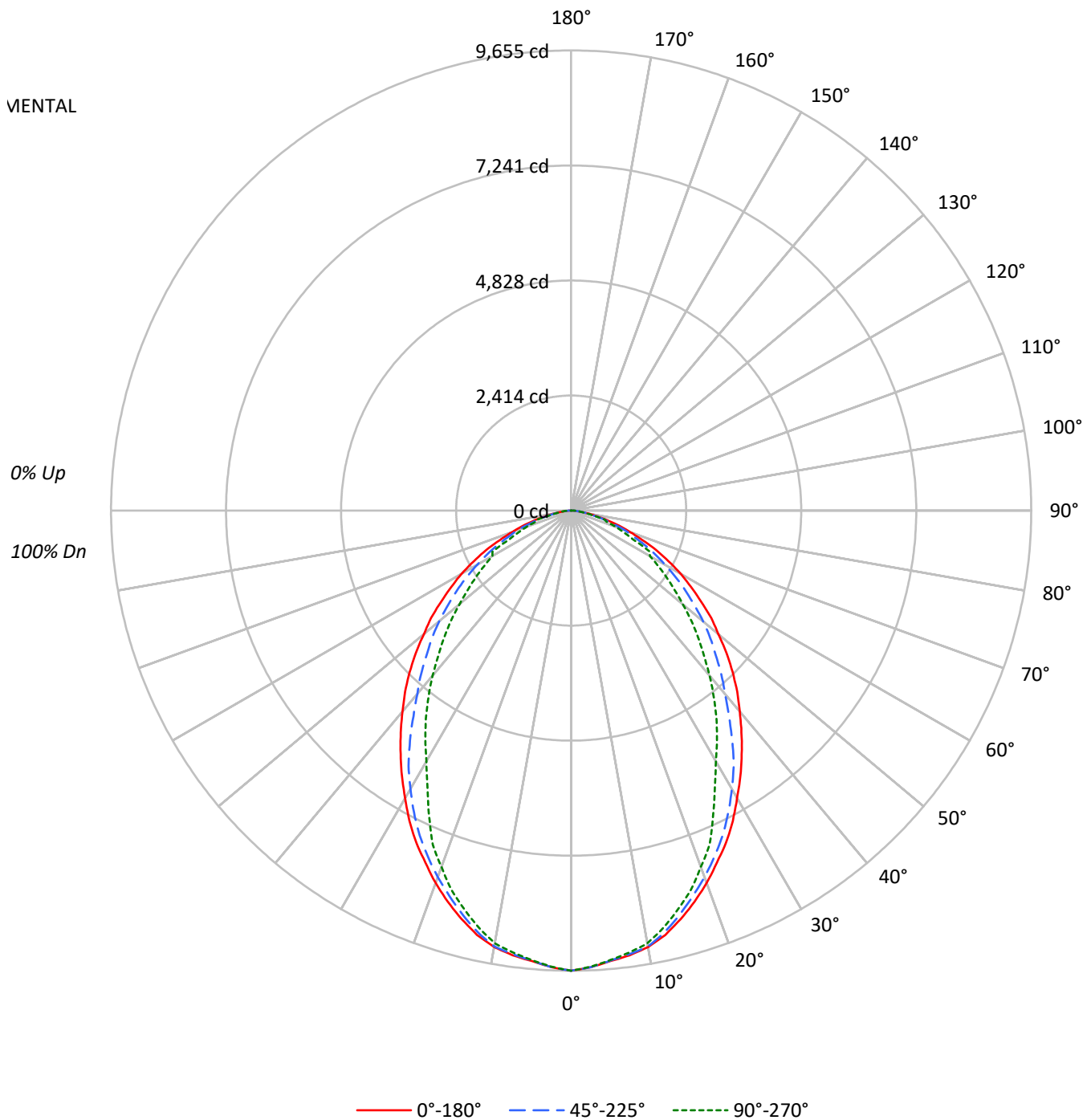
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	12991	12991	12991
5°	12814	12799	12784
10°	12703	12688	12596
15°	12361	12236	12065
20°	11906	11715	11395
25°	11417	11169	10473
30°	10821	10474	9434
35°	10248	9680	8727
40°	9665	8822	7940
45°	9111	8156	7179
50°	8434	7570	6402
55°	7803	6860	5734
60°	7149	6127	5136
65°	6290	5366	4549
70°	5181	4698	3864
75°	4120	3597	3772
80°	2768	2595	2421
85°	1723	2067	2413

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9111 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	898.7	4.7
10°-20°	2466.5	13.0
20°-30°	3414.7	18.0
30°-40°	3641.1	19.2
40°-50°	3321.7	17.5
50°-60°	2602.3	13.7
60°-70°	1696.1	8.9
70°-80°	751.4	4.0
80°-90°	161.3	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°	6780.0	35.8
0°-40°	10421.1	55.0
0°-60°	16345.2	86.2
0°-90°	18954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9655	9655	9655	9655	9655	
5°	9488	9476	9476	9465	9465	901
15°	8874	8874	8784	8695	8662	2495
25°	7690	7646	7523	7255	7054	3531
35°	6239	6195	5893	5447	5313	3901
45°	4788	4688	4286	3929	3773	3688
55°	3326	3226	2924	2578	2444	2983
65°	1976	1864	1685	1719	1429	1947
75°	792	737	692	658	726	849
85°	112	123	134	145	156	155
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9654.9	9654.9	9654.9	9654.9	9654.9
2.5°	9587.9	9587.9	9587.9	9576.8	9576.8
5°	9487.5	9476.3	9476.3	9465.2	9465.2
7.5°	9409.4	9398.2	9387.0	9375.9	9353.5
10°	9297.7	9297.7	9286.6	9230.8	9219.6
12.5°	9119.2	9108.0	9063.3	8985.2	8962.9
15°	8873.6	8873.6	8784.3	8695.0	8661.5
17.5°	8605.7	8594.5	8482.9	8393.6	8349.0
20°	8315.5	8293.2	8181.6	8036.5	7958.3
22.5°	7991.8	7991.8	7857.9	7668.1	7590.0
25°	7690.4	7645.8	7523.0	7255.1	7054.2
27.5°	7344.4	7277.5	7143.5	6764.0	6529.6
30°	6964.9	6931.4	6741.7	6250.6	6072.0
32.5°	6607.8	6551.9	6351.0	5837.6	5692.5
35°	6239.4	6194.8	5893.4	5446.9	5313.0
37.5°	5871.1	5815.3	5435.8	5078.6	4911.2
40°	5502.7	5435.8	5022.8	4699.1	4520.5
42.5°	5156.7	5067.4	4665.6	4319.6	4118.7
45°	4788.4	4687.9	4286.1	3928.9	3772.7
47.5°	4420.1	4330.8	3962.4	3594.1	3415.5
50°	4029.4	3951.3	3616.4	3248.1	3058.3
52.5°	3705.7	3582.9	3259.2	2890.9	2734.6
55°	3326.2	3225.7	2924.4	2578.4	2444.4
57.5°	2980.2	2879.7	2600.7	2277.0	2165.4
60°	2656.5	2511.4	2277.0	1998.0	1908.7
62.5°	2299.3	2187.7	1986.8	1752.4	1864.0
65°	1975.6	1864.0	1685.4	1718.9	1428.7
67.5°	1618.5	1562.6	1406.4	1250.1	1205.5
70°	1317.1	1250.1	1194.3	1026.9	982.2
72.5°	1049.2	982.2	904.1	814.8	781.3
75°	792.5	736.7	692.0	658.5	725.5
77.5°	546.9	524.6	491.1	457.6	446.5
80°	357.2	346.0	334.9	323.7	312.5
82.5°	212.1	212.1	212.1	212.1	212.1
85°	111.6	122.8	133.9	145.1	156.3
87.5°	67.0	67.0	78.1	89.3	100.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)