

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: P563636

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563636
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15525.0 lumens
Efficiency: N/A
Efficacy: 89.8 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

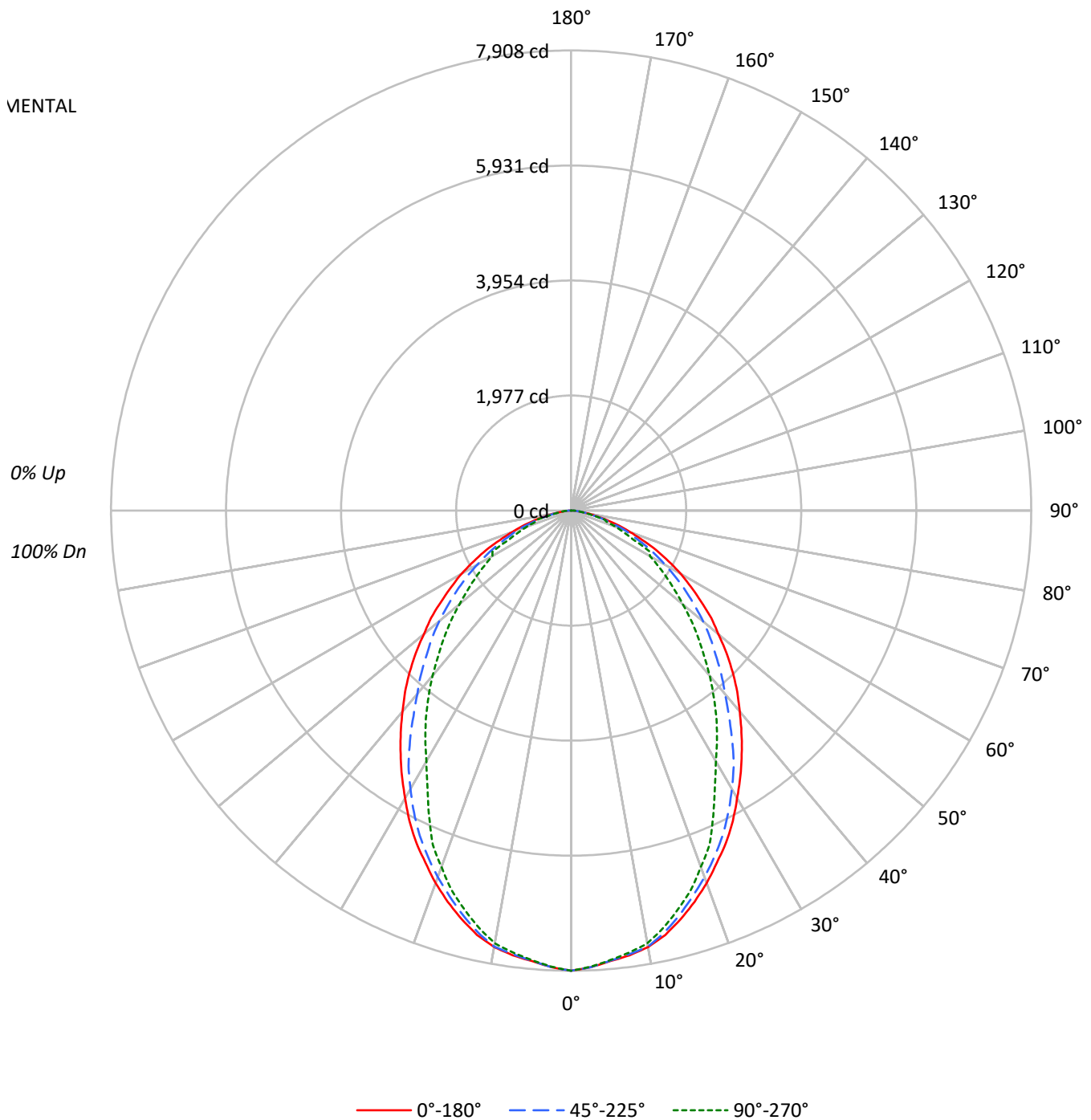
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10640	10640	10640
5°	10496	10483	10471
10°	10405	10392	10317
15°	10124	10022	9882
20°	9752	9595	9334
25°	9352	9148	8578
30°	8863	8579	7727
35°	8394	7929	7148
40°	7916	7226	6503
45°	7463	6680	5880
50°	6908	6201	5243
55°	6391	5619	4697
60°	5855	5019	4207
65°	5152	4395	3726
70°	4244	3848	3165
75°	3374	2947	3090
80°	2267	2125	1984
85°	1411	1694	1976

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7463 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	736.1	4.7
10°-20°	2020.3	13.0
20°-30°	2797.0	18.0
30°-40°	2982.4	19.2
40°-50°	2720.8	17.5
50°-60°	2131.5	13.7
60°-70°	1389.2	8.9
70°-80°	615.5	4.0
80°-90°	132.2	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°	5553.4	35.8
0°-40°	8535.8	55.0
0°-60°	13388.1	86.2
0°-90°	15525.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15525.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7908	7908	7908	7908	7908	
5°	7771	7762	7762	7753	7753	738
15°	7268	7268	7195	7122	7094	2043
25°	6299	6263	6162	5943	5778	2892
35°	5111	5074	4827	4462	4352	3195
45°	3922	3840	3511	3218	3090	3021
55°	2724	2642	2395	2112	2002	2444
65°	1618	1527	1380	1408	1170	1595
75°	649	603	567	539	594	696
85°	91	101	110	119	128	127
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7908.2	7908.2	7908.2	7908.2	7908.2
2.5°	7853.4	7853.4	7853.4	7844.2	7844.2
5°	7771.1	7761.9	7761.9	7752.8	7752.8
7.5°	7707.1	7698.0	7688.8	7679.7	7661.4
10°	7615.7	7615.7	7606.5	7560.8	7551.7
12.5°	7469.4	7460.2	7423.7	7359.7	7341.4
15°	7268.3	7268.3	7195.1	7122.0	7094.5
17.5°	7048.8	7039.7	6948.3	6875.1	6838.6
20°	6811.1	6792.8	6701.4	6582.6	6518.6
22.5°	6546.0	6546.0	6436.3	6280.9	6216.9
25°	6299.2	6262.6	6162.0	5942.6	5778.0
27.5°	6015.7	5960.9	5851.2	5540.3	5348.3
30°	5704.9	5677.5	5522.0	5119.8	4973.5
32.5°	5412.3	5366.6	5202.1	4781.5	4662.7
35°	5110.6	5074.1	4827.2	4461.5	4351.8
37.5°	4808.9	4763.2	4452.4	4159.8	4022.7
40°	4507.2	4452.4	4114.1	3849.0	3702.7
42.5°	4223.8	4150.7	3821.5	3538.1	3373.6
45°	3922.1	3839.8	3510.7	3218.1	3090.2
47.5°	3620.4	3547.3	3245.6	2943.9	2797.6
50°	3300.4	3236.4	2962.2	2660.5	2505.0
52.5°	3035.3	2934.7	2669.6	2367.9	2239.9
55°	2724.5	2642.2	2395.3	2111.9	2002.2
57.5°	2441.0	2358.8	2130.2	1865.1	1773.6
60°	2175.9	2057.1	1865.1	1636.5	1563.4
62.5°	1883.3	1791.9	1627.4	1435.4	1526.8
65°	1618.2	1526.8	1380.5	1407.9	1170.2
67.5°	1325.7	1279.9	1151.9	1024.0	987.4
70°	1078.8	1024.0	978.2	841.1	804.5
72.5°	859.4	804.5	740.5	667.4	640.0
75°	649.1	603.4	566.8	539.4	594.3
77.5°	448.0	429.7	402.3	374.8	365.7
80°	292.6	283.4	274.3	265.1	256.0
82.5°	173.7	173.7	173.7	173.7	173.7
85°	91.4	100.6	109.7	118.9	128.0
87.5°	54.9	54.9	64.0	73.1	82.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)