

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: P564081

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564081
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-LD4-4STD-40-UNV-80-84-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15766.0 lumens
Efficiency: N/A
Efficacy: 118.4 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

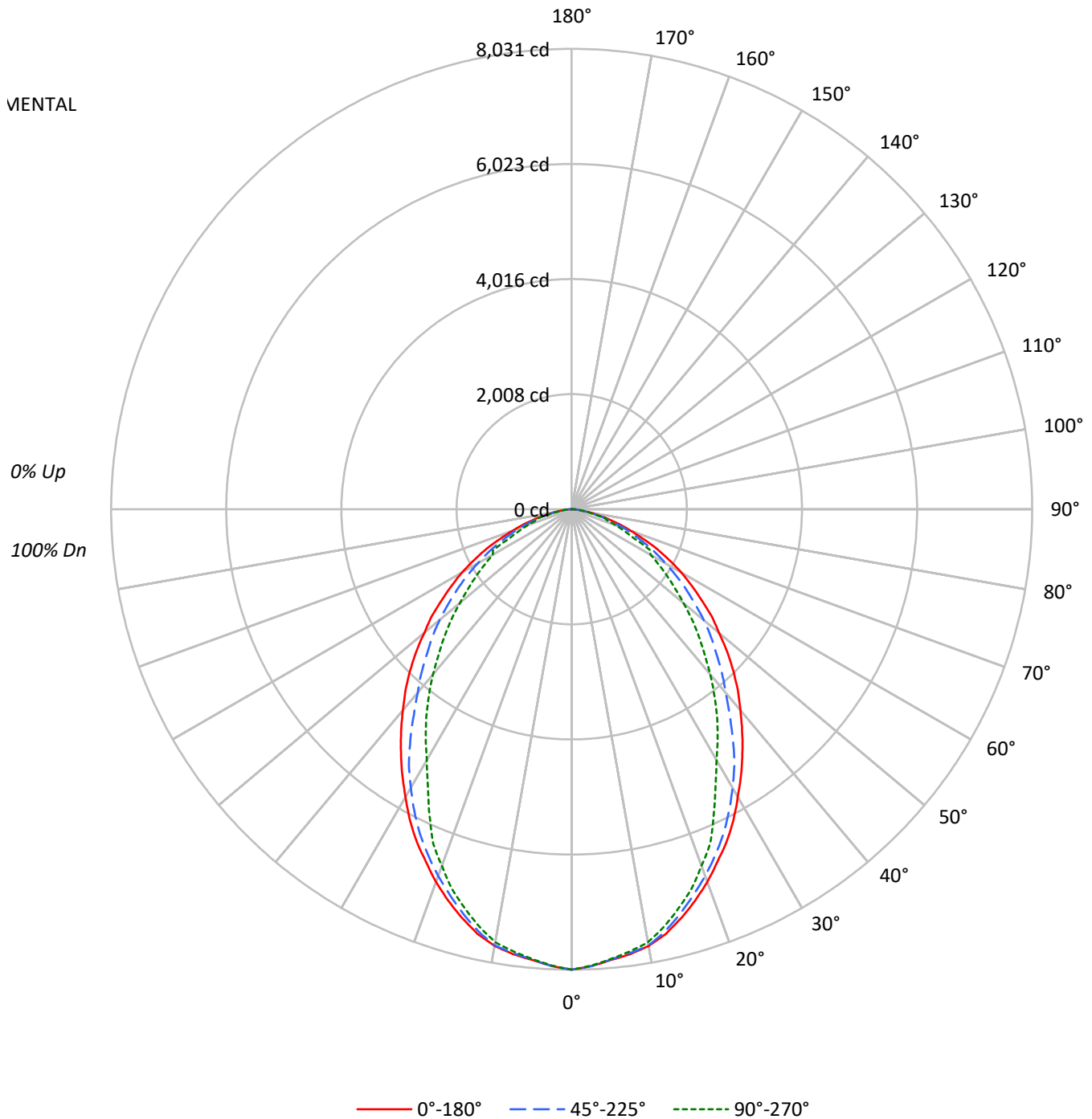
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10806	10806	10806
5°	10659	10646	10634
10°	10566	10554	10478
15°	10282	10178	10036
20°	9904	9744	9478
25°	9497	9290	8711
30°	9001	8712	7847
35°	8525	8052	7259
40°	8039	7338	6604
45°	7579	6784	5971
50°	7016	6297	5325
55°	6490	5706	4770
60°	5946	5097	4272
65°	5232	4463	3784
70°	4310	3908	3214
75°	3427	2992	3137
80°	2302	2158	2015
85°	1433	1720	2007

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7579 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	747.6	4.7
10°-20°	2051.7	13.0
20°-30°	2840.4	18.0
30°-40°	3028.7	19.2
40°-50°	2763.0	17.5
50°-60°	2164.6	13.7
60°-70°	1410.8	8.9
70°-80°	625.0	4.0
80°-90°	134.2	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°	5639.6	35.8
0°-40°	8668.3	55.0
0°-60°	13596.0	86.2
0°-90°	15766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15766.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8031	8031	8031	8031	8031	
5°	7892	7882	7882	7873	7873	749
15°	7381	7381	7307	7232	7205	2075
25°	6397	6360	6258	6035	5868	2937
35°	5190	5153	4902	4531	4419	3245
45°	3983	3899	3565	3268	3138	3068
55°	2767	2683	2432	2145	2033	2482
65°	1643	1550	1402	1430	1188	1620
75°	659	613	576	548	604	706
85°	93	102	111	121	130	129
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8031.0	8031.0	8031.0	8031.0	8031.0
2.5°	7975.3	7975.3	7975.3	7966.0	7966.0
5°	7891.7	7882.4	7882.4	7873.2	7873.2
7.5°	7826.7	7817.4	7808.2	7798.9	7780.3
10°	7733.9	7733.9	7724.6	7678.2	7668.9
12.5°	7585.3	7576.1	7538.9	7473.9	7455.4
15°	7381.1	7381.1	7306.8	7232.5	7204.7
17.5°	7158.3	7149.0	7056.1	6981.9	6944.7
20°	6916.9	6898.3	6805.5	6684.8	6619.8
22.5°	6647.6	6647.6	6536.2	6378.4	6313.4
25°	6396.9	6359.8	6257.7	6034.8	5867.7
27.5°	6109.1	6053.4	5942.0	5626.3	5431.4
30°	5793.5	5765.6	5607.8	5199.3	5050.7
32.5°	5496.4	5449.9	5282.8	4855.7	4735.0
35°	5190.0	5152.8	4902.2	4530.8	4419.4
37.5°	4883.6	4837.2	4521.5	4224.4	4085.1
40°	4577.2	4521.5	4178.0	3908.7	3760.2
42.5°	4289.4	4215.1	3880.9	3593.1	3425.9
45°	3983.0	3899.4	3565.2	3268.1	3138.1
47.5°	3676.6	3602.3	3296.0	2989.6	2841.0
50°	3351.7	3286.7	3008.1	2701.8	2543.9
52.5°	3082.4	2980.3	2711.0	2404.7	2274.7
55°	2766.7	2683.2	2432.5	2144.7	2033.3
57.5°	2478.9	2395.4	2163.3	1894.0	1801.2
60°	2209.7	2089.0	1894.0	1661.9	1587.6
62.5°	1912.6	1819.7	1652.6	1457.6	1550.5
65°	1643.3	1550.5	1401.9	1429.8	1188.4
67.5°	1346.2	1299.8	1169.8	1039.9	1002.7
70°	1095.6	1039.9	993.4	854.2	817.0
72.5°	872.7	817.0	752.0	677.8	649.9
75°	659.2	612.8	575.6	547.8	603.5
77.5°	454.9	436.4	408.5	380.7	371.4
80°	297.1	287.8	278.5	269.2	260.0
82.5°	176.4	176.4	176.4	176.4	176.4
85°	92.8	102.1	111.4	120.7	130.0
87.5°	55.7	55.7	65.0	74.3	83.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)