

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: P564151

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564151
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-50-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15033.0 lumens
Efficiency: N/A
Efficacy: 112.9 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

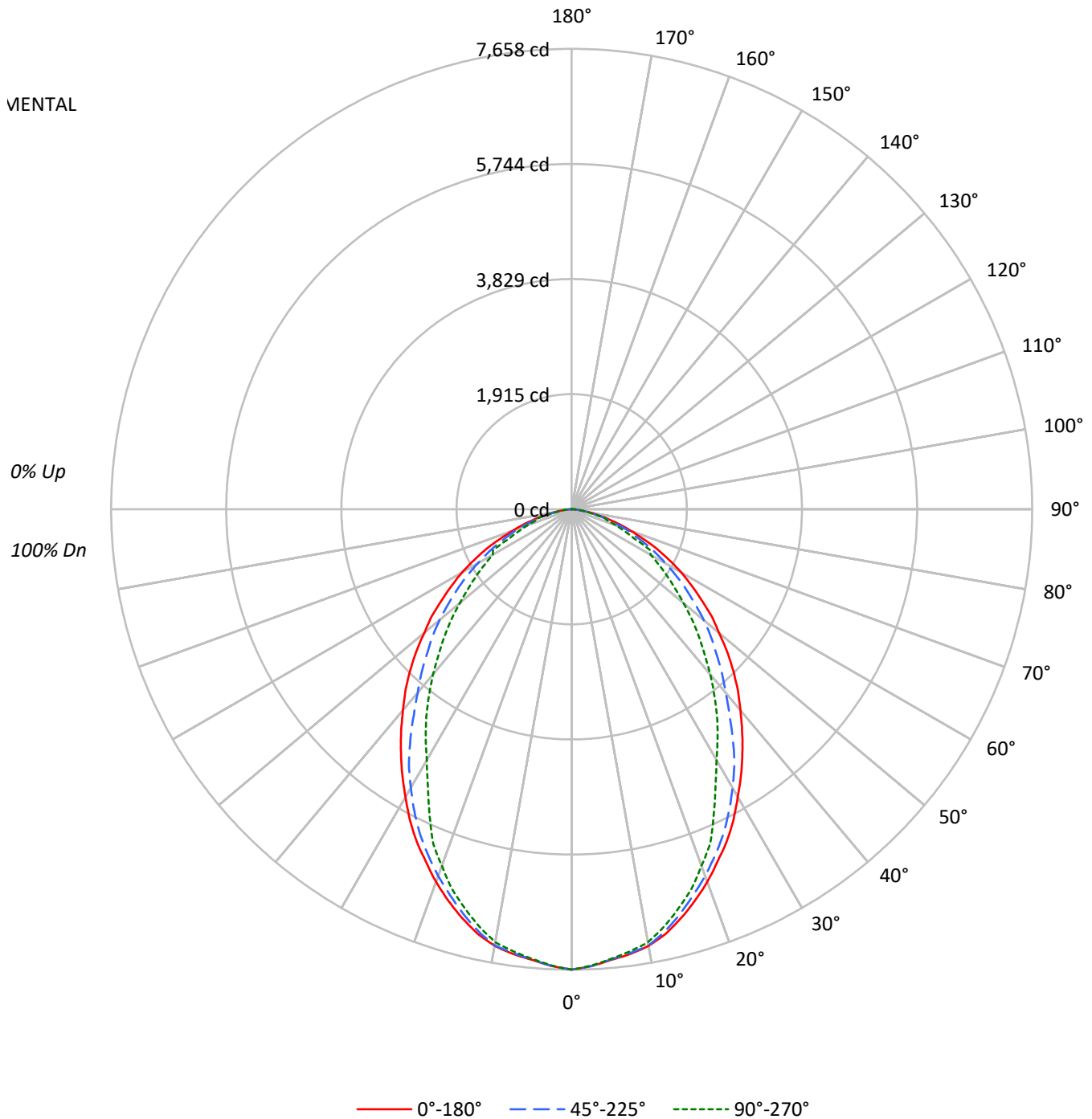
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	10303	10303	10303
5°	10163	10151	10139
10°	10075	10063	9991
15°	9803	9705	9569
20°	9443	9291	9038
25°	9055	8858	8306
30°	8582	8307	7482
35°	8128	7678	6921
40°	7666	6997	6297
45°	7226	6468	5694
50°	6689	6004	5077
55°	6188	5441	4548
60°	5670	4860	4074
65°	4989	4256	3607
70°	4109	3726	3065
75°	3267	2853	2991
80°	2195	2058	1921
85°	1366	1639	1913

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7226 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	712.8	4.7
10°-20°	1956.3	13.0
20°-30°	2708.3	18.0
30°-40°	2887.9	19.2
40°-50°	2634.6	17.5
50°-60°	2064.0	13.7
60°-70°	1345.2	8.9
70°-80°	596.0	4.0
80°-90°	128.0	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°	5377.4	35.8
0°-40°	8265.3	55.0
0°-60°	12963.9	86.2
0°-90°	15033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15033.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7658	7658	7658	7658	7658	
5°	7525	7516	7516	7507	7507	714
15°	7038	7038	6967	6896	6870	1979
25°	6100	6064	5967	5754	5595	2800
35°	4949	4913	4674	4320	4214	3094
45°	3798	3718	3399	3116	2992	2925
55°	2638	2558	2319	2045	1939	2366
65°	1567	1478	1337	1363	1133	1544
75°	628	584	549	522	575	674
85°	88	97	106	115	124	123
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7657.6	7657.6	7657.6	7657.6	7657.6
2.5°	7604.5	7604.5	7604.5	7595.6	7595.6
5°	7524.8	7516.0	7516.0	7507.1	7507.1
7.5°	7462.8	7454.0	7445.1	7436.3	7418.6
10°	7374.3	7374.3	7365.5	7321.2	7312.4
12.5°	7232.7	7223.8	7188.4	7126.4	7108.7
15°	7037.9	7037.9	6967.1	6896.3	6869.7
17.5°	6825.5	6816.6	6728.1	6657.3	6621.8
20°	6595.3	6577.6	6489.0	6374.0	6312.0
22.5°	6338.6	6338.6	6232.3	6081.8	6019.9
25°	6099.5	6064.1	5966.7	5754.3	5594.9
27.5°	5825.1	5772.0	5665.7	5364.8	5178.8
30°	5524.1	5497.5	5347.0	4957.5	4815.9
32.5°	5240.8	5196.6	5037.2	4630.0	4514.9
35°	4948.7	4913.3	4674.2	4320.1	4213.9
37.5°	4656.5	4612.3	4311.3	4028.0	3895.2
40°	4364.4	4311.3	3983.7	3727.0	3585.4
42.5°	4090.0	4019.1	3700.4	3426.0	3266.7
45°	3797.8	3718.1	3399.4	3116.2	2992.2
47.5°	3505.7	3434.9	3142.7	2850.6	2708.9
50°	3195.8	3133.9	2868.3	2576.1	2425.6
52.5°	2939.1	2841.7	2585.0	2292.9	2168.9
55°	2638.1	2558.4	2319.4	2045.0	1938.7
57.5°	2363.7	2284.0	2062.7	1806.0	1717.4
60°	2106.9	1991.9	1806.0	1584.6	1513.8
62.5°	1823.7	1735.1	1575.8	1389.9	1478.4
65°	1566.9	1478.4	1336.8	1363.3	1133.1
67.5°	1283.6	1239.4	1115.4	991.5	956.1
70°	1044.6	991.5	947.2	814.5	779.0
72.5°	832.2	779.0	717.1	646.2	619.7
75°	628.5	584.3	548.9	522.3	575.4
77.5°	433.8	416.1	389.5	363.0	354.1
80°	283.3	274.4	265.6	256.7	247.9
82.5°	168.2	168.2	168.2	168.2	168.2
85°	88.5	97.4	106.2	115.1	123.9
87.5°	53.1	53.1	62.0	70.8	79.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)