

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: P563127

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563127
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-LD4-3HI-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

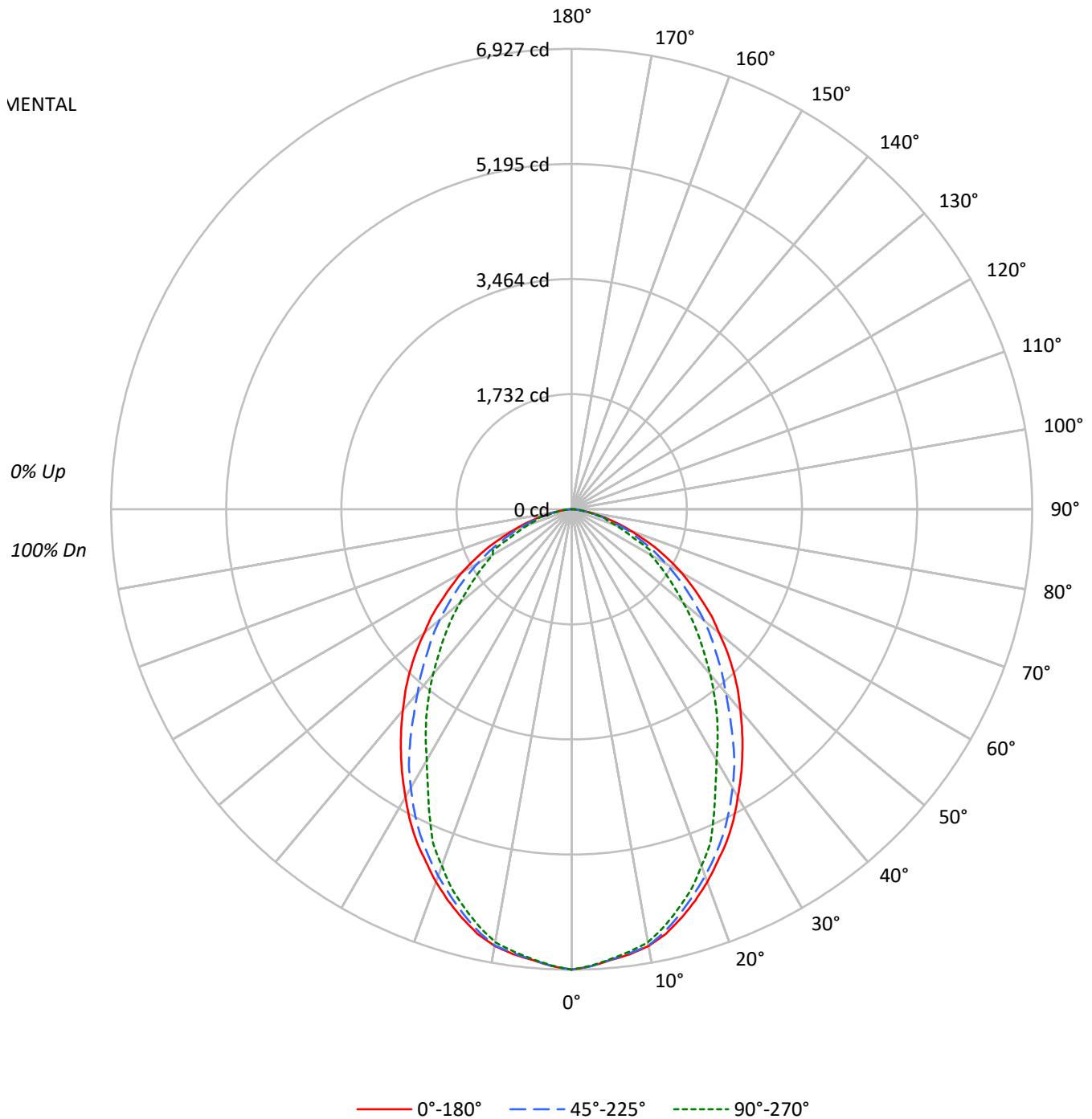
Lumens per Lamp: N/A
Luminaire Lumens: 13599.0 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	9320	9320	9320
5°	9194	9183	9172
10°	9114	9103	9037
15°	8868	8779	8656
20°	8543	8405	8176
25°	8191	8013	7514
30°	7764	7515	6768
35°	7353	6945	6261
40°	6934	6330	5697
45°	6537	5852	5151
50°	6051	5431	4593
55°	5598	4922	4114
60°	5129	4396	3685
65°	4513	3850	3264
70°	3718	3371	2772
75°	2956	2581	2706
80°	1986	1861	1737
85°	1237	1484	1731

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6537 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	644.8	4.7
10°-20°	1769.7	13.0
20°-30°	2450.0	18.0
30°-40°	2612.4	19.2
40°-50°	2383.3	17.5
50°-60°	1867.1	13.7
60°-70°	1216.9	8.9
70°-80°	539.1	4.0
80°-90°	115.8	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°	4864.5	35.8
0°-40°	7476.9	55.0
0°-60°	11727.2	86.2
0°-90°	13599.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13599.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6927	6927	6927	6927	6927	
5°	6807	6799	6799	6791	6791	646
15°	6367	6367	6302	6238	6214	1790
25°	5518	5486	5398	5205	5061	2533
35°	4477	4445	4228	3908	3812	2799
45°	3436	3364	3075	2819	2707	2646
55°	2386	2314	2098	1850	1754	2140
65°	1418	1337	1209	1233	1025	1397
75°	569	528	496	472	520	609
85°	80	88	96	104	112	111
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6927.1	6927.1	6927.1	6927.1	6927.1
2.5°	6879.1	6879.1	6879.1	6871.1	6871.1
5°	6807.0	6799.0	6799.0	6791.0	6791.0
7.5°	6751.0	6743.0	6735.0	6726.9	6710.9
10°	6670.9	6670.9	6662.9	6622.8	6614.8
12.5°	6542.8	6534.7	6502.7	6446.7	6430.6
15°	6366.6	6366.6	6302.5	6238.4	6214.4
17.5°	6174.4	6166.4	6086.3	6022.2	5990.2
20°	5966.2	5950.1	5870.1	5766.0	5709.9
22.5°	5733.9	5733.9	5637.8	5501.7	5445.6
25°	5517.7	5485.7	5397.6	5205.4	5061.2
27.5°	5269.4	5221.4	5125.3	4853.0	4684.8
30°	4997.2	4973.1	4837.0	4484.6	4356.5
32.5°	4740.9	4700.9	4556.7	4188.3	4084.2
35°	4476.6	4444.6	4228.4	3908.0	3811.9
37.5°	4212.3	4172.3	3900.0	3643.8	3523.6
40°	3948.1	3900.0	3603.7	3371.5	3243.3
42.5°	3699.8	3635.8	3347.5	3099.2	2955.0
45°	3435.5	3363.5	3075.2	2818.9	2706.8
47.5°	3171.3	3107.2	2842.9	2578.7	2450.5
50°	2891.0	2834.9	2594.7	2330.4	2194.3
52.5°	2658.7	2570.7	2338.4	2074.1	1962.0
55°	2386.5	2314.4	2098.2	1849.9	1753.8
57.5°	2138.2	2066.1	1865.9	1633.7	1553.6
60°	1906.0	1801.9	1633.7	1433.5	1369.4
62.5°	1649.7	1569.6	1425.5	1257.3	1337.4
65°	1417.5	1337.4	1209.2	1233.3	1025.1
67.5°	1161.2	1121.2	1009.0	896.9	864.9
70°	945.0	896.9	856.9	736.8	704.7
72.5°	752.8	704.7	648.7	584.6	560.6
75°	568.6	528.5	496.5	472.5	520.5
77.5°	392.4	376.4	352.4	328.3	320.3
80°	256.3	248.3	240.2	232.2	224.2
82.5°	152.2	152.2	152.2	152.2	152.2
85°	80.1	88.1	96.1	104.1	112.1
87.5°	48.0	48.0	56.1	64.1	72.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)