

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: P563791

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563791
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-50-UNV-81-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17854.0 lumens
Efficiency: N/A
Efficacy: 103.3 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

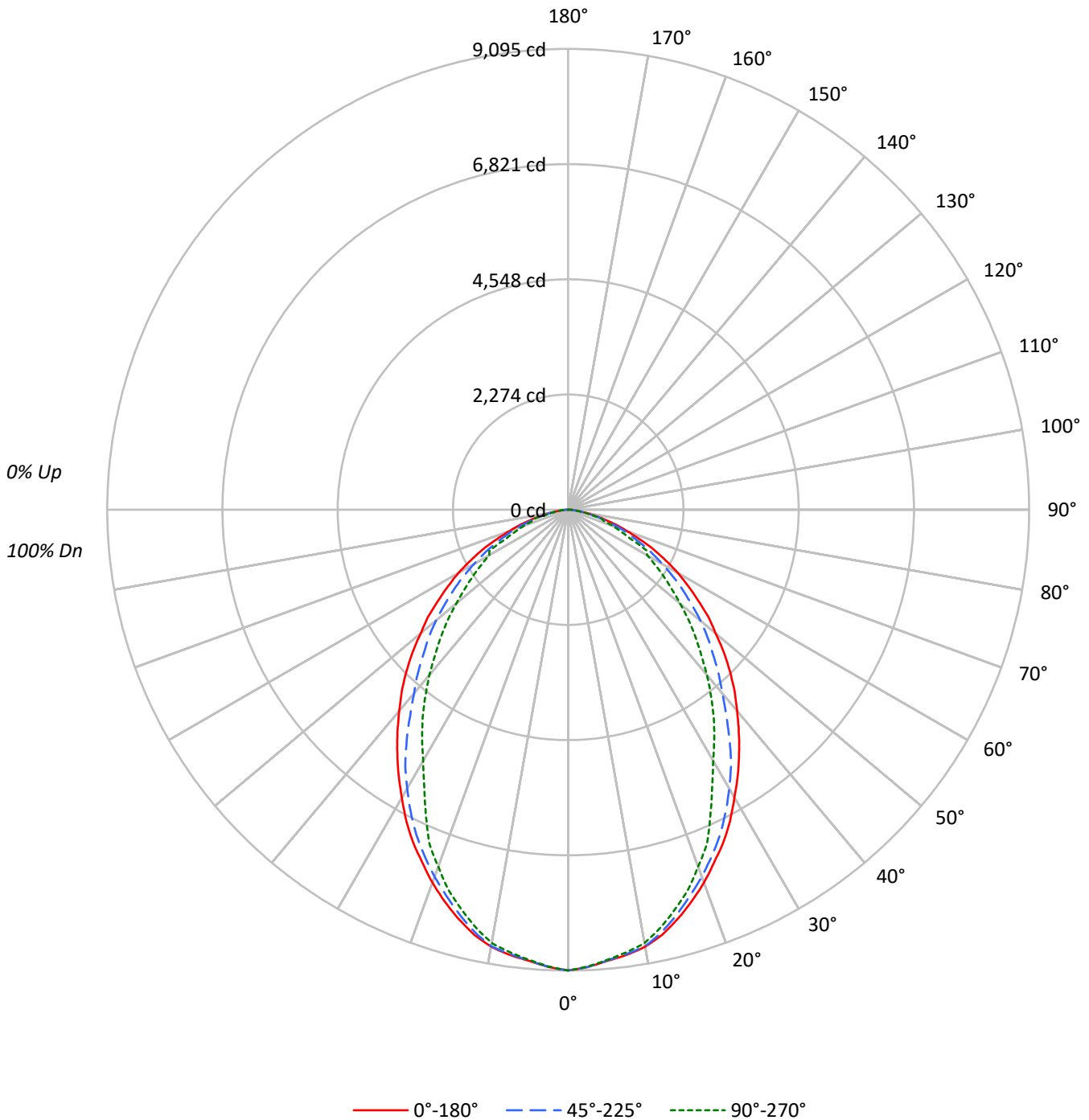
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	12237	12237	12237
5°	12070	12056	12042
10°	11966	11951	11865
15°	11643	11526	11365
20°	11215	11035	10734
25°	10754	10520	9865
30°	10193	9866	8886
35°	9654	9118	8220
40°	9104	8310	7479
45°	8583	7682	6762
50°	7945	7131	6030
55°	7350	6462	5401
60°	6734	5772	4838
65°	5925	5054	4285
70°	4880	4426	3640
75°	3881	3389	3553
80°	2607	2444	2281
85°	1623	1948	2272

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8583 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	846.6	4.7
10°-20°	2323.4	13.0
20°-30°	3216.6	18.0
30°-40°	3429.8	19.2
40°-50°	3129.0	17.5
50°-60°	2451.3	13.7
60°-70°	1597.6	8.9
70°-80°	707.8	4.0
80°-90°	152.0	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°	6386.5	35.8
0°-40°	9816.3	55.0
0°-60°	15396.6	86.2
0°-90°	17854.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17854.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9095	9095	9095	9095	9095	
5°	8937	8926	8926	8916	8916	848
15°	8359	8359	8274	8190	8159	2350
25°	7244	7202	7086	6834	6645	3326
35°	5877	5835	5551	5131	5005	3674
45°	4510	4416	4037	3701	3554	3474
55°	3133	3038	2755	2429	2303	2810
65°	1861	1756	1588	1619	1346	1834
75°	746	694	652	620	683	800
85°	105	116	126	137	147	146
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9094.6	9094.6	9094.6	9094.6	9094.6
2.5°	9031.5	9031.5	9031.5	9021.0	9021.0
5°	8936.9	8926.4	8926.4	8915.9	8915.9
7.5°	8863.3	8852.8	8842.3	8831.7	8810.7
10°	8758.1	8758.1	8747.6	8695.1	8684.5
12.5°	8589.9	8579.4	8537.3	8463.8	8442.7
15°	8358.6	8358.6	8274.5	8190.4	8158.8
17.5°	8106.3	8095.8	7990.6	7906.5	7864.5
20°	7832.9	7811.9	7706.7	7570.1	7496.5
22.5°	7528.0	7528.0	7401.8	7223.1	7149.5
25°	7244.1	7202.1	7086.4	6834.1	6644.8
27.5°	6918.2	6855.1	6728.9	6371.5	6150.7
30°	6560.7	6529.2	6350.4	5887.8	5719.6
32.5°	6224.3	6171.7	5982.5	5498.8	5362.1
35°	5877.3	5835.3	5551.4	5130.8	5004.7
37.5°	5530.4	5477.8	5120.3	4783.9	4626.1
40°	5183.4	5120.3	4731.3	4426.4	4258.2
42.5°	4857.5	4773.3	4394.8	4068.9	3879.7
45°	4510.5	4415.9	4037.4	3700.9	3553.7
47.5°	4163.5	4079.4	3732.5	3385.5	3217.3
50°	3795.5	3721.9	3406.5	3059.6	2880.8
52.5°	3490.6	3375.0	3070.1	2723.1	2575.9
55°	3133.2	3038.5	2754.7	2428.7	2302.6
57.5°	2807.2	2712.6	2449.8	2144.9	2039.7
60°	2502.3	2365.6	2144.9	1882.0	1797.9
62.5°	2165.9	2060.7	1871.5	1650.7	1755.8
65°	1861.0	1755.8	1587.6	1619.2	1345.8
67.5°	1524.5	1472.0	1324.8	1177.6	1135.5
70°	1240.6	1177.6	1125.0	967.3	925.2
72.5°	988.3	925.2	851.6	767.5	736.0
75°	746.5	693.9	651.9	620.3	683.4
77.5°	515.2	494.2	462.6	431.1	420.6
80°	336.4	325.9	315.4	304.9	294.4
82.5°	199.8	199.8	199.8	199.8	199.8
85°	105.1	115.7	126.2	136.7	147.2
87.5°	63.1	63.1	73.6	84.1	94.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)