

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: P563733

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563733
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-40-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17428.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

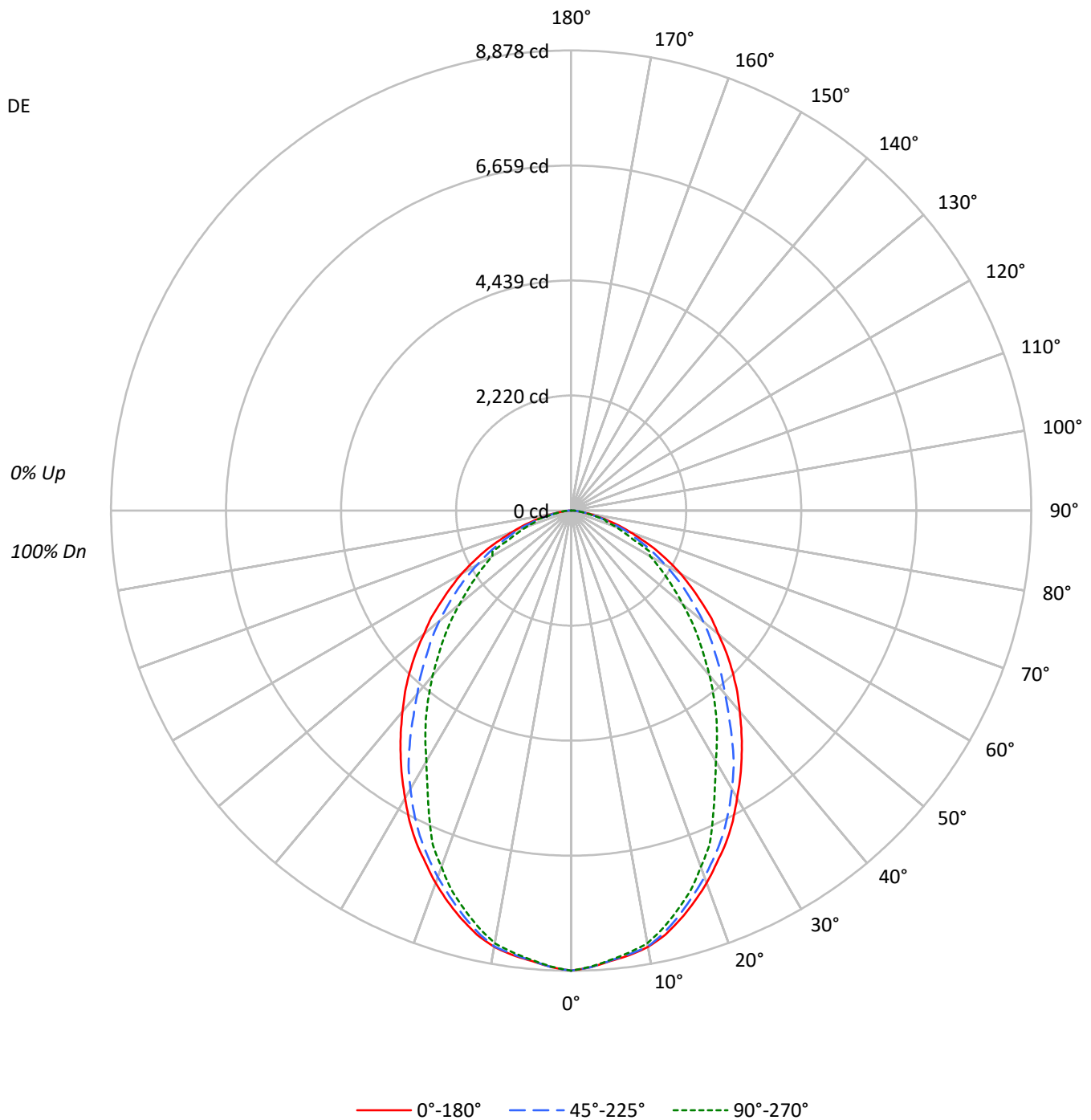
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	11945	11945	11945
5°	11782	11769	11755
10°	11680	11666	11582
15°	11365	11251	11094
20°	10948	10772	10478
25°	10498	10269	9629
30°	9950	9631	8674
35°	9423	8901	8024
40°	8887	8112	7301
45°	8378	7499	6601
50°	7755	6960	5886
55°	7174	6308	5272
60°	6573	5634	4723
65°	5784	4934	4182
70°	4764	4320	3553
75°	3788	3308	3468
80°	2545	2386	2227
85°	1584	1902	2218

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8378 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	826.4	4.7
10°-20°	2267.9	13.0
20°-30°	3139.8	18.0
30°-40°	3347.9	19.2
40°-50°	3054.3	17.5
50°-60°	2392.8	13.7
60°-70°	1559.5	8.9
70°-80°	690.9	4.0
80°-90°	148.3	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°	6234.1	35.8
0°-40°	9582.1	55.0
0°-60°	15029.2	86.2
0°-90°	17428.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17428.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8878	8878	8878	8878	8878	
5°	8724	8713	8713	8703	8703	828
15°	8159	8159	8077	7995	7964	2294
25°	7071	7030	6917	6671	6486	3246
35°	5737	5696	5419	5008	4885	3587
45°	4403	4310	3941	3613	3469	3392
55°	3058	2966	2689	2371	2248	2743
65°	1817	1714	1550	1580	1314	1790
75°	729	677	636	606	667	781
85°	103	113	123	133	144	142
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8877.6	8877.6	8877.6	8877.6	8877.6
2.5°	8816.0	8816.0	8816.0	8805.7	8805.7
5°	8723.6	8713.4	8713.4	8703.1	8703.1
7.5°	8651.8	8641.5	8631.3	8621.0	8600.5
10°	8549.2	8549.2	8538.9	8487.6	8477.3
12.5°	8385.0	8374.7	8333.6	8261.8	8241.3
15°	8159.2	8159.2	8077.1	7995.0	7964.2
17.5°	7912.9	7902.6	7800.0	7717.9	7676.8
20°	7646.0	7625.5	7522.9	7389.4	7317.6
22.5°	7348.4	7348.4	7225.2	7050.8	6978.9
25°	7071.3	7030.2	6917.3	6671.0	6486.3
27.5°	6753.1	6691.5	6568.4	6219.4	6003.9
30°	6404.2	6373.4	6198.9	5747.3	5583.1
32.5°	6075.8	6024.4	5839.7	5367.6	5234.2
35°	5737.1	5696.0	5418.9	5008.4	4885.2
37.5°	5398.4	5347.1	4998.1	4669.7	4515.8
40°	5059.7	4998.1	4618.4	4320.8	4156.6
42.5°	4741.6	4659.5	4290.0	3971.8	3787.1
45°	4402.9	4310.5	3941.0	3612.6	3468.9
47.5°	4064.2	3982.1	3643.4	3304.7	3140.5
50°	3705.0	3633.1	3325.2	2986.6	2812.1
52.5°	3407.4	3294.5	2996.8	2658.1	2514.5
55°	3058.4	2966.0	2688.9	2370.8	2247.6
57.5°	2740.3	2647.9	2391.3	2093.7	1991.0
60°	2442.6	2309.2	2093.7	1837.1	1755.0
62.5°	2114.2	2011.6	1826.8	1611.3	1713.9
65°	1816.6	1713.9	1549.7	1580.5	1313.7
67.5°	1488.2	1436.8	1293.2	1149.5	1108.4
70°	1211.0	1149.5	1098.2	944.2	903.2
72.5°	964.7	903.2	831.3	749.2	718.4
75°	728.7	677.4	636.3	605.5	667.1
77.5°	502.9	482.4	451.6	420.8	410.5
80°	328.4	318.2	307.9	297.6	287.4
82.5°	195.0	195.0	195.0	195.0	195.0
85°	102.6	112.9	123.2	133.4	143.7
87.5°	61.6	61.6	71.8	82.1	92.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)