

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: P563415

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563415
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-LD4-3LO-50-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7830.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

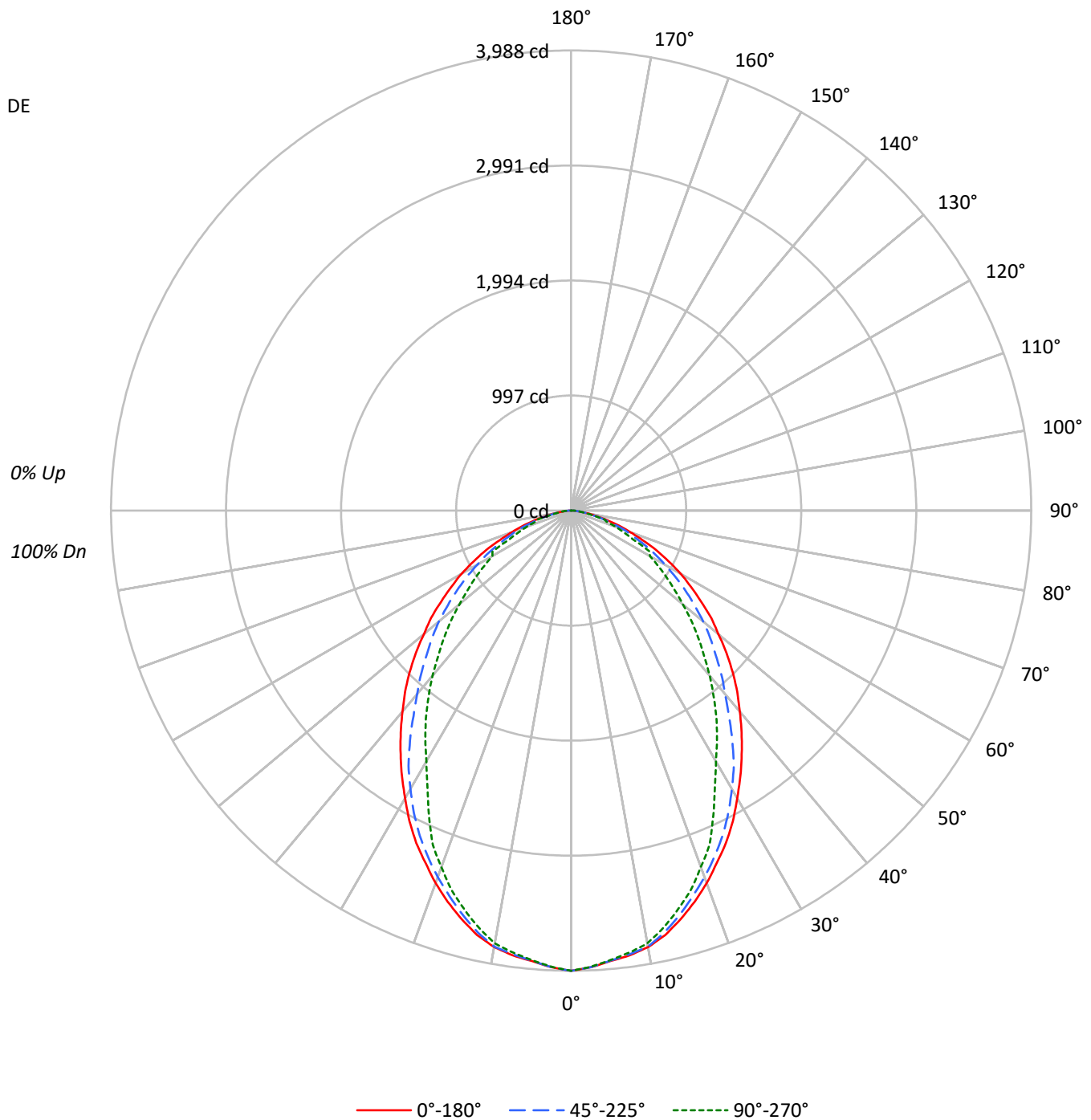
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5366	5366	5366
5°	5294	5287	5281
10°	5248	5241	5204
15°	5106	5055	4984
20°	4919	4839	4707
25°	4717	4614	4326
30°	4470	4327	3897
35°	4234	3999	3605
40°	3993	3644	3280
45°	3764	3369	2966
50°	3484	3127	2645
55°	3223	2834	2369
60°	2953	2531	2122
65°	2598	2217	1879
70°	2140	1941	1596
75°	1702	1486	1558
80°	1144	1072	1000
85°	712	854	997

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3764 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	371.3	4.7
10°-20°	1018.9	13.0
20°-30°	1410.6	18.0
30°-40°	1504.1	19.2
40°-50°	1372.2	17.5
50°-60°	1075.0	13.7
60°-70°	700.7	8.9
70°-80°	310.4	4.0
80°-90°	66.6	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°	2800.9	35.8
0°-40°	4305.0	55.0
0°-60°	6752.3	86.2
0°-90°	7830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3988	3988	3988	3988	3988	
5°	3919	3915	3915	3910	3910	372
15°	3666	3666	3629	3592	3578	1031
25°	3177	3158	3108	2997	2914	1459
35°	2578	2559	2435	2250	2195	1611
45°	1978	1937	1771	1623	1558	1524
55°	1374	1333	1208	1065	1010	1232
65°	816	770	696	710	590	804
75°	327	304	286	272	300	351
85°	46	51	55	60	65	64
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3988.5	3988.5	3988.5	3988.5	3988.5
2.5°	3960.8	3960.8	3960.8	3956.2	3956.2
5°	3919.3	3914.7	3914.7	3910.1	3910.1
7.5°	3887.1	3882.4	3877.8	3873.2	3864.0
10°	3840.9	3840.9	3836.3	3813.3	3808.7
12.5°	3767.2	3762.6	3744.1	3711.8	3702.6
15°	3665.7	3665.7	3628.8	3592.0	3578.1
17.5°	3555.1	3550.5	3504.3	3467.5	3449.0
20°	3435.2	3426.0	3379.8	3319.9	3287.6
22.5°	3301.5	3301.5	3246.1	3167.7	3135.5
25°	3177.0	3158.5	3107.8	2997.1	2914.1
27.5°	3034.0	3006.4	2951.0	2794.3	2697.4
30°	2877.3	2863.4	2785.0	2582.1	2508.4
32.5°	2729.7	2706.6	2623.6	2411.5	2351.6
35°	2577.5	2559.1	2434.6	2250.2	2194.8
37.5°	2425.4	2402.3	2245.5	2098.0	2028.8
40°	2273.2	2245.5	2074.9	1941.2	1867.4
42.5°	2130.3	2093.4	1927.4	1784.4	1701.5
45°	1978.1	1936.6	1770.6	1623.1	1558.5
47.5°	1825.9	1789.1	1636.9	1484.7	1411.0
50°	1664.6	1632.3	1494.0	1341.8	1263.4
52.5°	1530.8	1480.1	1346.4	1194.2	1129.7
55°	1374.1	1332.6	1208.1	1065.1	1009.8
57.5°	1231.1	1189.6	1074.4	940.6	894.5
60°	1097.4	1037.5	940.6	825.4	788.5
62.5°	949.9	903.8	820.8	723.9	770.0
65°	816.1	770.0	696.3	710.1	590.2
67.5°	668.6	645.5	581.0	516.4	498.0
70°	544.1	516.4	493.4	424.2	405.8
72.5°	433.4	405.8	373.5	336.6	322.8
75°	327.4	304.3	285.9	272.0	299.7
77.5°	225.9	216.7	202.9	189.1	184.4
80°	147.6	142.9	138.3	133.7	129.1
82.5°	87.6	87.6	87.6	87.6	87.6
85°	46.1	50.7	55.3	59.9	64.6
87.5°	27.7	27.7	32.3	36.9	41.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)