

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: P562517

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562517
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-LD4-2HI-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8628.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

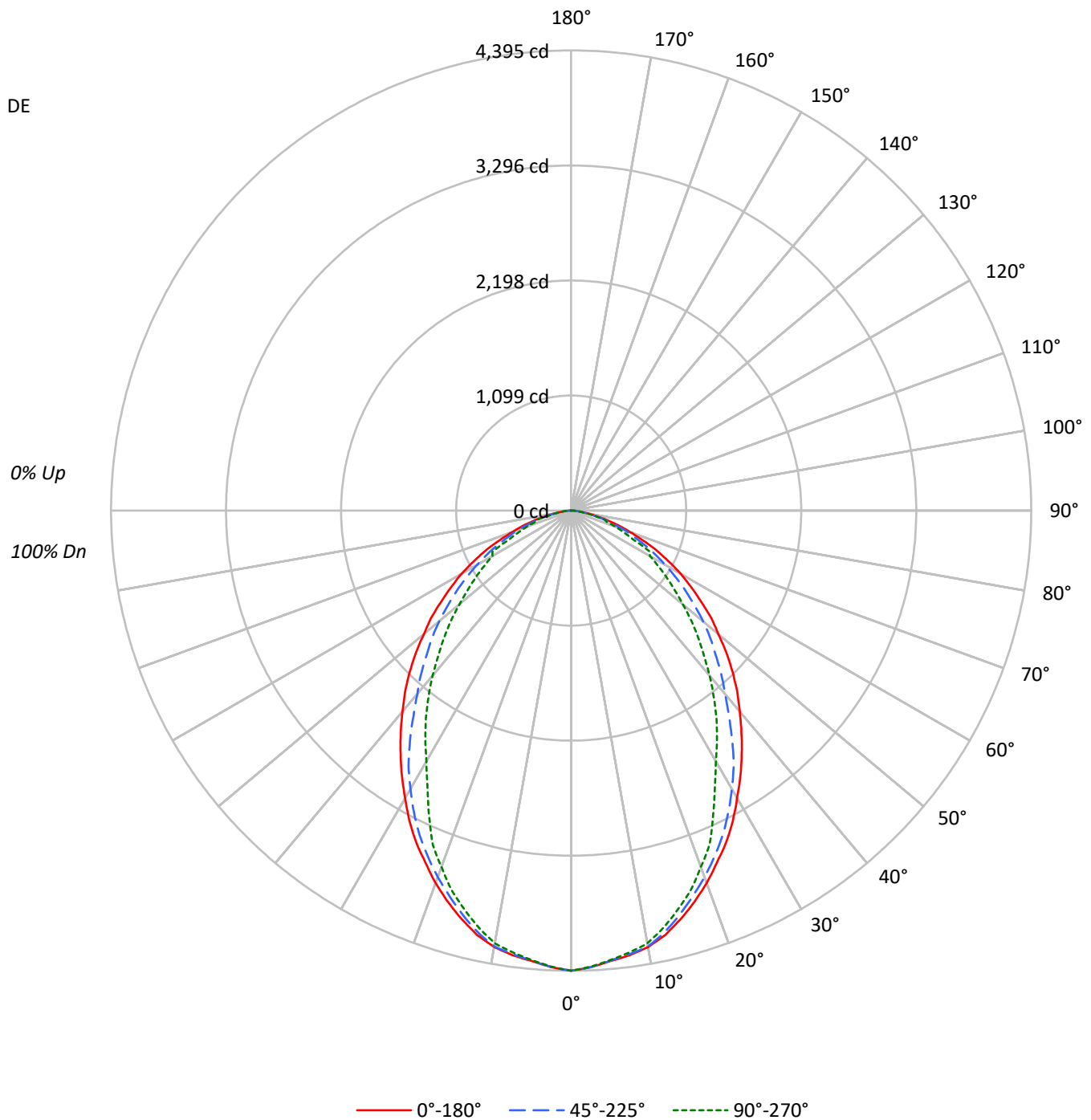
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	5913	5913	5913
5°	5833	5826	5819
10°	5782	5776	5734
15°	5627	5570	5492
20°	5420	5333	5187
25°	5197	5084	4767
30°	4926	4768	4294
35°	4665	4406	3972
40°	4400	4016	3614
45°	4148	3713	3268
50°	3839	3446	2914
55°	3552	3123	2610
60°	3254	2789	2338
65°	2863	2443	2071
70°	2358	2139	1759
75°	1875	1638	1717
80°	1260	1181	1103
85°	784	942	1098

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4148 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	409.1	4.7
10°-20°	1122.8	13.0
20°-30°	1554.4	18.0
30°-40°	1657.5	19.2
40°-50°	1512.1	17.5
50°-60°	1184.6	13.7
60°-70°	772.1	8.9
70°-80°	342.1	4.0
80°-90°	73.4	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°	3086.3	35.8
0°-40°	4743.8	55.0
0°-60°	7440.4	86.2
0°-90°	8628.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8628.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4395	4395	4395	4395	4395	
5°	4319	4314	4314	4309	4309	410
15°	4039	4039	3999	3958	3943	1136
25°	3501	3480	3424	3303	3211	1607
35°	2840	2820	2683	2480	2418	1776
45°	2180	2134	1951	1788	1717	1679
55°	1514	1468	1331	1174	1113	1358
65°	899	848	767	782	650	886
75°	361	335	315	300	330	387
85°	51	56	61	66	71	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4395.0	4395.0	4395.0	4395.0	4395.0
2.5°	4364.5	4364.5	4364.5	4359.4	4359.4
5°	4318.8	4313.7	4313.7	4308.6	4308.6
7.5°	4283.2	4278.1	4273.0	4268.0	4257.8
10°	4232.4	4232.4	4227.3	4201.9	4196.8
12.5°	4151.1	4146.0	4125.7	4090.1	4080.0
15°	4039.3	4039.3	3998.7	3958.0	3942.8
17.5°	3917.4	3912.3	3861.5	3820.8	3800.5
20°	3785.3	3775.1	3724.3	3658.3	3622.7
22.5°	3637.9	3637.9	3577.0	3490.6	3455.0
25°	3500.7	3480.4	3424.5	3302.6	3211.1
27.5°	3343.2	3312.8	3251.8	3079.0	2972.3
30°	3170.5	3155.2	3068.9	2845.3	2764.0
32.5°	3007.9	2982.5	2891.0	2657.3	2591.3
35°	2840.2	2819.9	2682.7	2479.5	2418.5
37.5°	2672.6	2647.2	2474.4	2311.8	2235.6
40°	2504.9	2474.4	2286.4	2139.1	2057.8
42.5°	2347.4	2306.7	2123.8	1966.3	1874.9
45°	2179.7	2134.0	1951.1	1788.5	1717.3
47.5°	2012.0	1971.4	1803.7	1636.1	1554.8
50°	1834.2	1798.6	1646.2	1478.5	1392.2
52.5°	1686.9	1631.0	1483.6	1316.0	1244.8
55°	1514.1	1468.4	1331.2	1173.7	1112.7
57.5°	1356.6	1310.9	1183.9	1036.5	985.7
60°	1209.3	1143.2	1036.5	909.5	868.8
62.5°	1046.7	995.9	904.4	797.7	848.5
65°	899.3	848.5	767.2	782.5	650.4
67.5°	736.7	711.3	640.2	569.1	548.7
70°	599.5	569.1	543.7	467.4	447.1
72.5°	477.6	447.1	411.6	370.9	355.7
75°	360.7	335.3	315.0	299.8	330.3
77.5°	249.0	238.8	223.6	208.3	203.2
80°	162.6	157.5	152.4	147.3	142.3
82.5°	96.5	96.5	96.5	96.5	96.5
85°	50.8	55.9	61.0	66.1	71.1
87.5°	30.5	30.5	35.6	40.6	45.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)