

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: P562505

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562505
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-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7679.0 lumens
Efficiency: N/A
Efficacy: 88.9 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

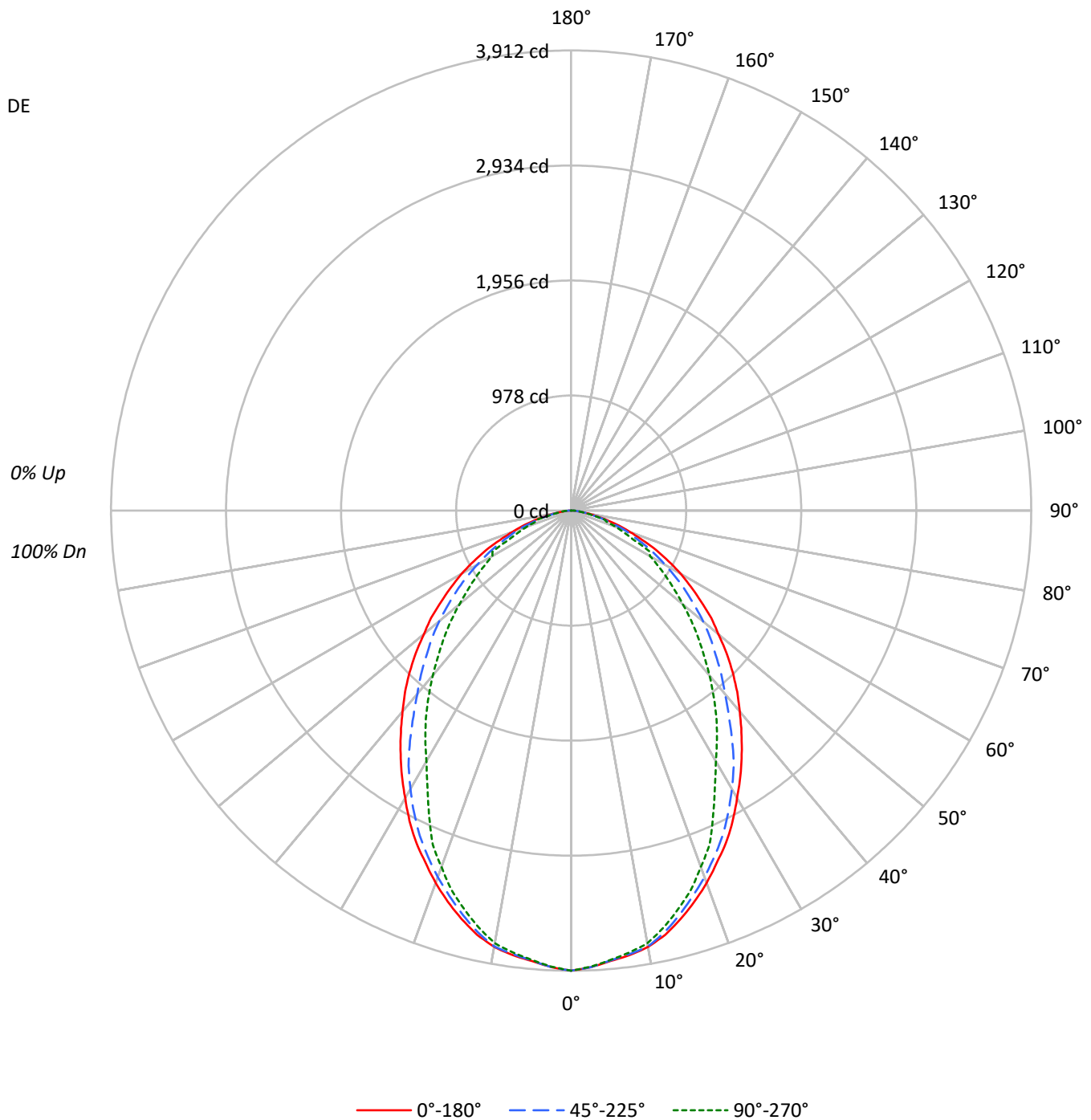
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5263	5263	5263
5°	5191	5185	5179
10°	5147	5140	5103
15°	5008	4957	4888
20°	4824	4746	4617
25°	4626	4525	4243
30°	4384	4243	3822
35°	4152	3922	3536
40°	3916	3574	3217
45°	3691	3304	2908
50°	3417	3067	2593
55°	3161	2779	2323
60°	2896	2482	2081
65°	2548	2174	1843
70°	2099	1904	1565
75°	1669	1458	1528
80°	1121	1051	981
85°	698	838	977

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3691 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	364.1	4.7
10°-20°	999.3	13.0
20°-30°	1383.4	18.0
30°-40°	1475.1	19.2
40°-50°	1345.8	17.5
50°-60°	1054.3	13.7
60°-70°	687.1	8.9
70°-80°	304.4	4.0
80°-90°	65.4	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°	2746.8	35.8
0°-40°	4222.0	55.0
0°-60°	6622.1	86.2
0°-90°	7679.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7679.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3912	3912	3912	3912	3912	
5°	3844	3839	3839	3835	3835	365
15°	3595	3595	3559	3523	3509	1011
25°	3116	3098	3048	2939	2858	1430
35°	2528	2510	2388	2207	2152	1580
45°	1940	1899	1736	1592	1528	1494
55°	1348	1307	1185	1045	990	1209
65°	800	755	683	696	579	789
75°	321	298	280	267	294	344
85°	45	50	54	59	63	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3911.6	3911.6	3911.6	3911.6	3911.6
2.5°	3884.4	3884.4	3884.4	3879.9	3879.9
5°	3843.7	3839.2	3839.2	3834.7	3834.7
7.5°	3812.1	3807.6	3803.1	3798.5	3789.5
10°	3766.9	3766.9	3762.4	3739.7	3735.2
12.5°	3694.5	3690.0	3671.9	3640.3	3631.2
15°	3595.0	3595.0	3558.9	3522.7	3509.1
17.5°	3486.5	3482.0	3436.8	3400.6	3382.5
20°	3368.9	3359.9	3314.7	3255.9	3224.2
22.5°	3237.8	3237.8	3183.5	3106.7	3075.0
25°	3115.7	3097.6	3047.9	2939.3	2857.9
27.5°	2975.5	2948.4	2894.1	2740.4	2645.4
30°	2821.8	2808.2	2731.3	2532.4	2460.0
32.5°	2677.1	2654.4	2573.1	2365.0	2306.2
35°	2527.8	2509.7	2387.6	2206.8	2152.5
37.5°	2378.6	2356.0	2202.2	2057.5	1989.7
40°	2229.4	2202.2	2034.9	1903.8	1831.4
42.5°	2089.2	2053.0	1890.2	1750.0	1668.6
45°	1940.0	1899.3	1736.5	1591.8	1528.5
47.5°	1790.7	1754.6	1605.3	1456.1	1383.7
50°	1632.5	1600.8	1465.1	1315.9	1239.0
52.5°	1501.3	1451.6	1320.4	1171.2	1107.9
55°	1347.6	1306.9	1184.8	1044.6	990.3
57.5°	1207.4	1166.7	1053.6	922.5	877.3
60°	1076.2	1017.5	922.5	809.4	773.3
62.5°	931.5	886.3	804.9	710.0	755.2
65°	800.4	755.2	682.8	696.4	578.8
67.5°	655.7	633.1	569.8	506.5	488.4
70°	533.6	506.5	483.9	416.0	397.9
72.5°	425.1	397.9	366.3	330.1	316.5
75°	321.1	298.5	280.4	266.8	293.9
77.5°	221.6	212.5	199.0	185.4	180.9
80°	144.7	140.2	135.7	131.1	126.6
82.5°	85.9	85.9	85.9	85.9	85.9
85°	45.2	49.7	54.3	58.8	63.3
87.5°	27.1	27.1	31.7	36.2	40.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)