

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: P563922

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563922
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-LD4-4LO-40-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9017.0 lumens
Efficiency: N/A
Efficacy: 96.3 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

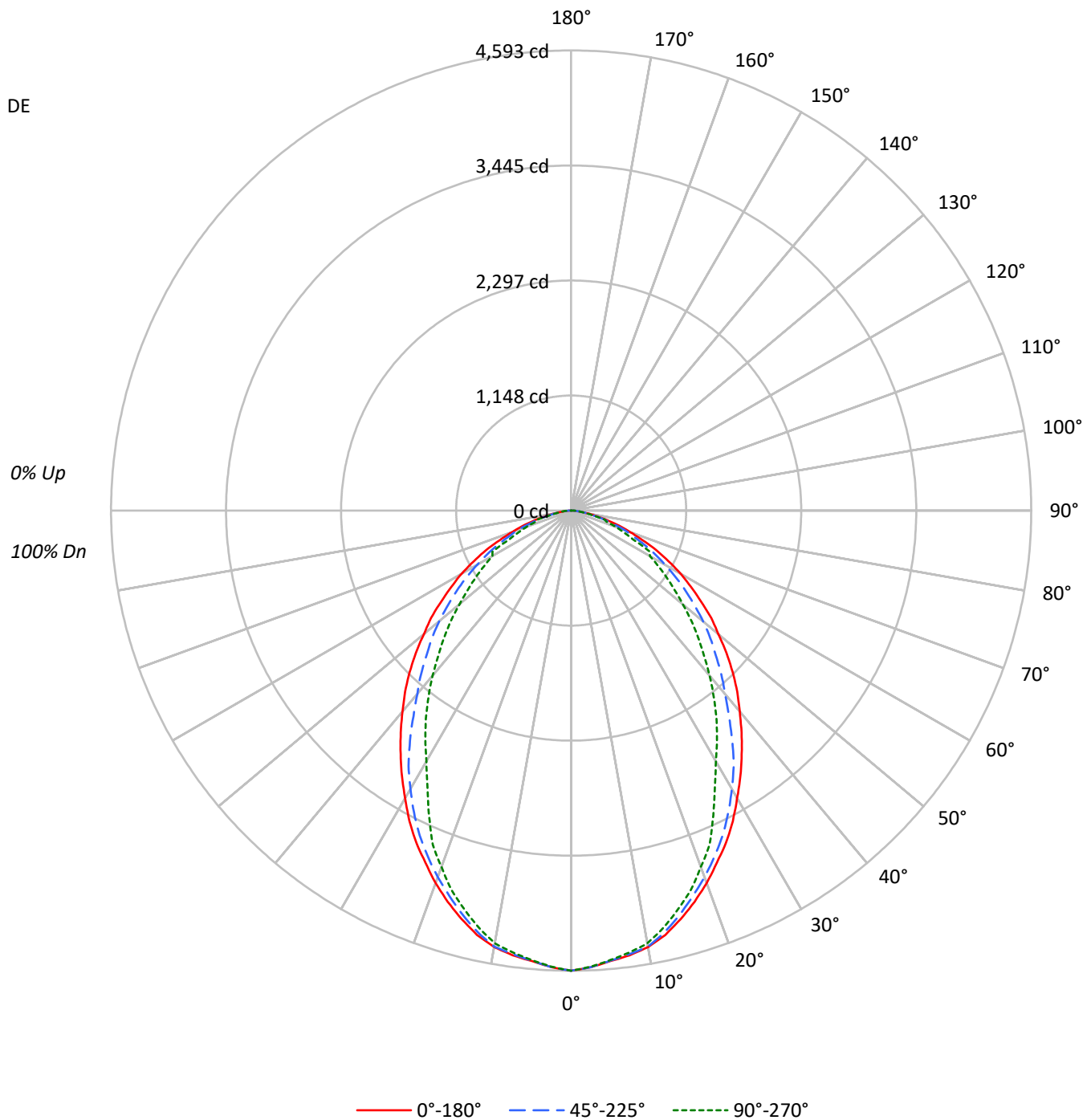
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563922

CATALOG NUMBER: FSR-24-4-LD4-4LO-40-UNV-82-85-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563922

CATALOG NUMBER: FSR-24-4-LD4-4LO-40-UNV-82-85-EDD-90

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°	6180	6180	6180
5°	6096	6089	6082
10°	6043	6036	5992
15°	5880	5821	5740
20°	5664	5573	5421
25°	5431	5313	4982
30°	5148	4983	4488
35°	4876	4605	4152
40°	4598	4197	3777
45°	4335	3880	3415
50°	4012	3601	3045
55°	3712	3263	2728
60°	3401	2915	2443
65°	2992	2553	2164
70°	2465	2235	1838
75°	1960	1711	1794
80°	1316	1234	1152
85°	820	983	1147

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4335 cd/sqm



TEST NUMBER: P563922

CATALOG NUMBER: FSR-24-4-LD4-4LO-40-UNV-82-85-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	427.6	4.7
10°-20°	1173.4	13.0
20°-30°	1624.5	18.0
30°-40°	1732.2	19.2
40°-50°	1580.3	17.5
50°-60°	1238.0	13.7
60°-70°	806.9	8.9
70°-80°	357.5	4.0
80°-90°	76.8	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°	3225.5	35.8
0°-40°	4957.6	55.0
0°-60°	7775.9	86.2
0°-90°	9017.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9017.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4593	4593	4593	4593	4593	
5°	4514	4508	4508	4503	4503	428
15°	4221	4221	4179	4136	4121	1187
25°	3659	3637	3579	3452	3356	1680
35°	2968	2947	2804	2591	2528	1856
45°	2278	2230	2039	1869	1795	1755
55°	1582	1535	1391	1227	1163	1419
65°	940	887	802	818	680	926
75°	377	350	329	313	345	404
85°	53	58	64	69	74	74
90°	0	0	0	0	0	



TEST NUMBER: P563922

CATALOG NUMBER: FSR-24-4-LD4-4LO-40-UNV-82-85-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4593.1	4593.1	4593.1	4593.1	4593.1
2.5°	4561.3	4561.3	4561.3	4556.0	4556.0
5°	4513.5	4508.2	4508.2	4502.9	4502.9
7.5°	4476.3	4471.0	4465.7	4460.4	4449.8
10°	4423.2	4423.2	4417.9	4391.4	4386.0
12.5°	4338.3	4332.9	4311.7	4274.5	4263.9
15°	4221.4	4221.4	4179.0	4136.5	4120.6
17.5°	4094.0	4088.7	4035.6	3993.1	3971.9
20°	3955.9	3945.3	3892.2	3823.2	3786.0
22.5°	3802.0	3802.0	3738.2	3648.0	3610.8
25°	3658.6	3637.3	3578.9	3451.5	3355.9
27.5°	3494.0	3462.1	3398.4	3217.9	3106.3
30°	3313.4	3297.5	3207.2	2973.6	2888.6
32.5°	3143.5	3117.0	3021.4	2777.1	2708.1
35°	2968.3	2947.0	2803.7	2591.3	2527.6
37.5°	2793.1	2766.5	2586.0	2416.0	2336.4
40°	2617.8	2586.0	2389.5	2235.5	2150.5
42.5°	2453.2	2410.7	2219.6	2055.0	1959.4
45°	2278.0	2230.2	2039.0	1869.1	1794.8
47.5°	2102.8	2060.3	1885.0	1709.8	1624.9
50°	1916.9	1879.7	1720.4	1545.2	1454.9
52.5°	1762.9	1704.5	1550.5	1375.3	1300.9
55°	1582.4	1534.6	1391.2	1226.6	1162.9
57.5°	1417.8	1370.0	1237.2	1083.2	1030.1
60°	1263.8	1194.7	1083.2	950.5	908.0
62.5°	1093.9	1040.8	945.2	833.7	886.8
65°	939.9	886.8	801.8	817.7	679.7
67.5°	769.9	743.4	669.1	594.7	573.5
70°	626.6	594.7	568.2	488.5	467.3
72.5°	499.1	467.3	430.1	387.6	371.7
75°	377.0	350.5	329.2	313.3	345.1
77.5°	260.2	249.6	233.6	217.7	212.4
80°	169.9	164.6	159.3	154.0	148.7
82.5°	100.9	100.9	100.9	100.9	100.9
85°	53.1	58.4	63.7	69.0	74.3
87.5°	31.9	31.9	37.2	42.5	47.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)