

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: P562562

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562562
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-40-UNV-81-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 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: 7565.0 lumens
Efficiency: N/A
Efficacy: 87.6 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

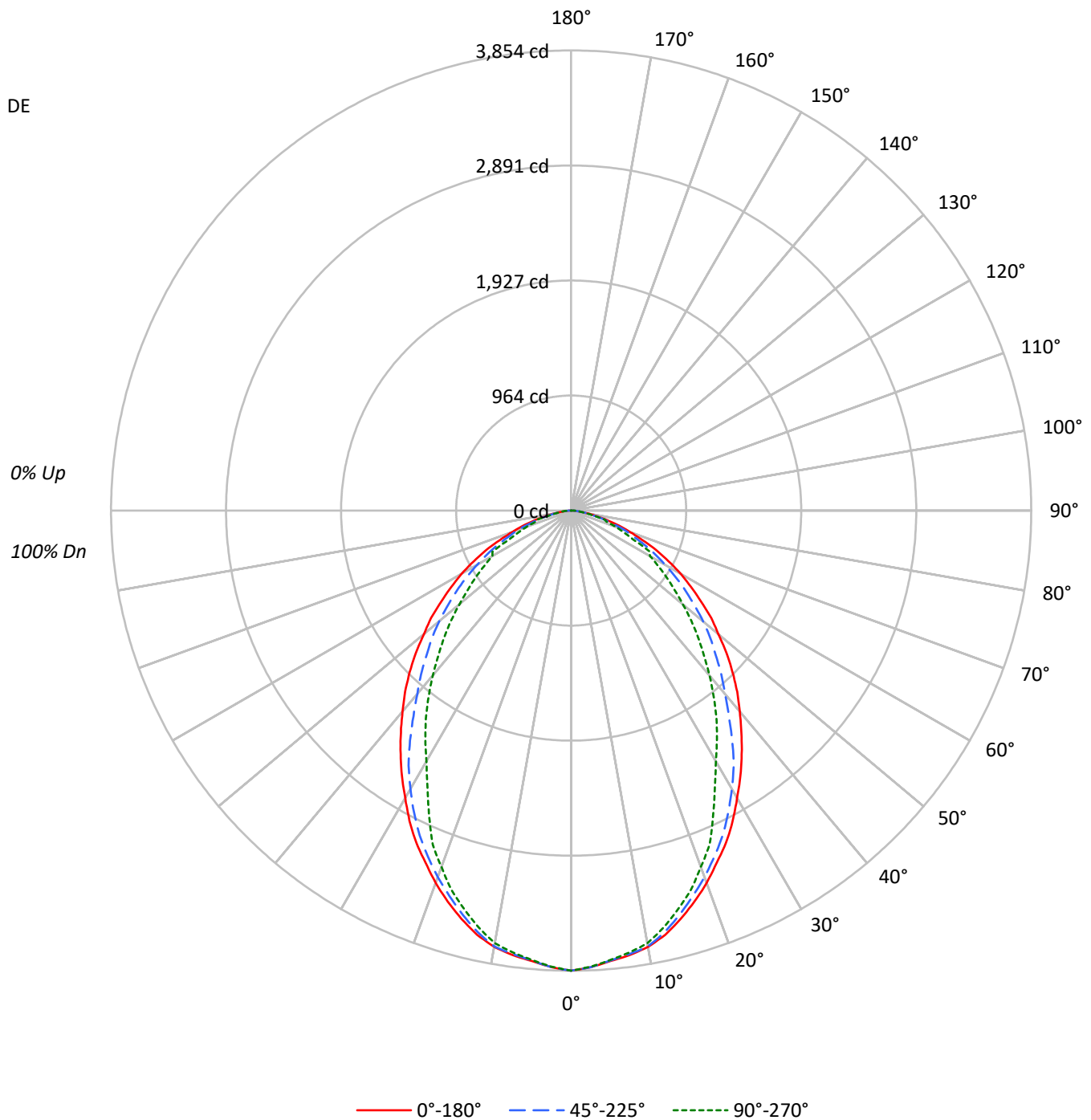
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562562

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-81-85-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562562

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-81-85-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	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°	5185	5185	5185
5°	5114	5108	5102
10°	5070	5064	5028
15°	4933	4884	4815
20°	4752	4676	4548
25°	4557	4458	4180
30°	4319	4181	3765
35°	4090	3864	3483
40°	3858	3521	3169
45°	3637	3255	2865
50°	3366	3021	2555
55°	3114	2738	2289
60°	2853	2446	2050
65°	2510	2142	1815
70°	2068	1875	1542
75°	1644	1436	1506
80°	1105	1035	966
85°	687	826	963

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3637 cd/sqm



TEST NUMBER: P562562

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-81-85-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.7	4.7
10°-20°	984.4	13.0
20°-30°	1362.9	18.0
30°-40°	1453.2	19.2
40°-50°	1325.8	17.5
50°-60°	1038.7	13.7
60°-70°	677.0	8.9
70°-80°	299.9	4.0
80°-90°	64.4	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°	2706.1	35.8
0°-40°	4159.3	55.0
0°-60°	6523.8	86.2
0°-90°	7565.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7565.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3854	3854	3854	3854	3854	
5°	3787	3782	3782	3778	3778	359
15°	3542	3542	3506	3470	3457	996
25°	3069	3052	3003	2896	2816	1409
35°	2490	2472	2352	2174	2120	1557
45°	1911	1871	1711	1568	1506	1472
55°	1328	1288	1167	1029	976	1191
65°	788	744	673	686	570	777
75°	316	294	276	263	290	339
85°	44	49	54	58	62	62
90°	0	0	0	0	0	



TEST NUMBER: P562562

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-81-85-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3853.5	3853.5	3853.5	3853.5	3853.5
2.5°	3826.8	3826.8	3826.8	3822.3	3822.3
5°	3786.7	3782.2	3782.2	3777.8	3777.8
7.5°	3755.5	3751.0	3746.6	3742.1	3733.2
10°	3711.0	3711.0	3706.5	3684.2	3679.8
12.5°	3639.7	3635.2	3617.4	3586.2	3577.3
15°	3541.7	3541.7	3506.0	3470.4	3457.0
17.5°	3434.7	3430.3	3385.7	3350.1	3332.3
20°	3318.9	3310.0	3265.5	3207.5	3176.4
22.5°	3189.7	3189.7	3136.3	3060.5	3029.3
25°	3069.4	3051.6	3002.6	2895.7	2815.5
27.5°	2931.3	2904.6	2851.2	2699.7	2606.1
30°	2779.9	2766.5	2690.8	2494.8	2423.5
32.5°	2637.3	2615.0	2534.9	2329.9	2272.0
35°	2490.3	2472.5	2352.2	2174.0	2120.5
37.5°	2343.3	2321.0	2169.5	2027.0	1960.2
40°	2196.3	2169.5	2004.7	1875.5	1804.2
42.5°	2058.2	2022.5	1862.2	1724.1	1643.9
45°	1911.2	1871.1	1710.7	1568.1	1505.8
47.5°	1764.2	1728.5	1581.5	1434.5	1363.2
50°	1608.2	1577.0	1443.4	1296.4	1220.6
52.5°	1479.0	1430.0	1300.8	1153.8	1091.5
55°	1327.6	1287.5	1167.2	1029.1	975.6
57.5°	1189.5	1149.4	1038.0	908.8	864.3
60°	1060.3	1002.4	908.8	797.4	761.8
62.5°	917.7	873.2	793.0	699.4	744.0
65°	788.5	744.0	672.7	686.1	570.2
67.5°	646.0	623.7	561.3	499.0	481.1
70°	525.7	499.0	476.7	409.9	392.0
72.5°	418.8	392.0	360.8	325.2	311.8
75°	316.3	294.0	276.2	262.8	289.6
77.5°	218.3	209.4	196.0	182.7	178.2
80°	142.6	138.1	133.6	129.2	124.7
82.5°	84.6	84.6	84.6	84.6	84.6
85°	44.5	49.0	53.5	57.9	62.4
87.5°	26.7	26.7	31.2	35.6	40.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)