

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: P562549

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562549
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-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9370.0 lumens
Efficiency: N/A
Efficacy: 108.4 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

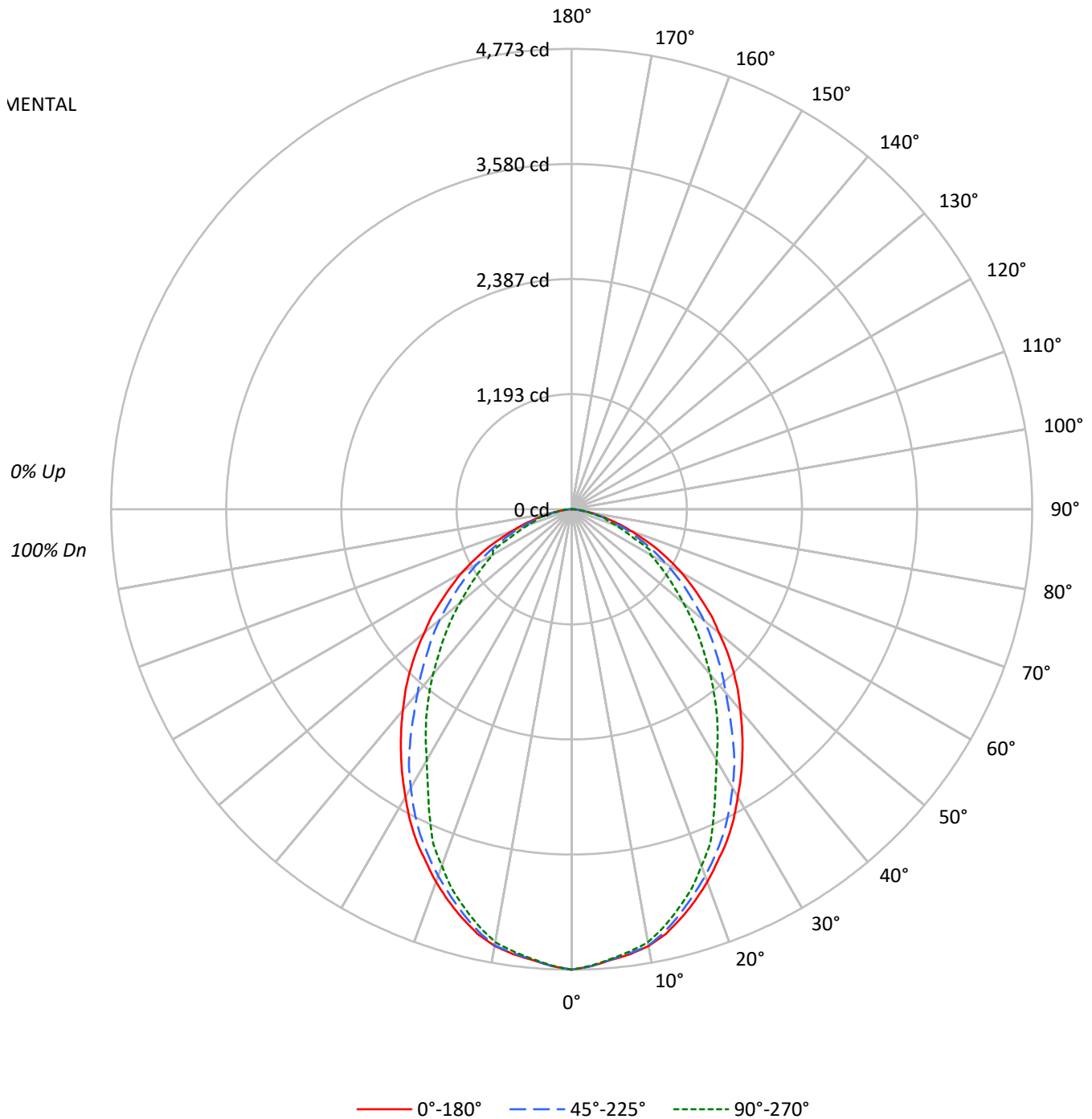
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562549

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-80-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562549

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-80-86-EDD

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	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°	6422	6422	6422
5°	6335	6327	6320
10°	6280	6272	6227
15°	6110	6049	5964
20°	5886	5791	5633
25°	5644	5521	5177
30°	5349	5178	4664
35°	5066	4785	4314
40°	4778	4361	3925
45°	4504	4032	3549
50°	4169	3742	3165
55°	3857	3391	2835
60°	3534	3029	2539
65°	3110	2653	2249
70°	2561	2323	1910
75°	2037	1778	1865
80°	1368	1282	1197
85°	852	1022	1193

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4504 cd/sqm



TEST NUMBER: P562549

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-80-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	444.3	4.7
10°-20°	1219.3	13.0
20°-30°	1688.1	18.0
30°-40°	1800.0	19.2
40°-50°	1642.1	17.5
50°-60°	1286.5	13.7
60°-70°	838.5	8.9
70°-80°	371.5	4.0
80°-90°	79.7	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°	3351.7	35.8
0°-40°	5151.7	55.0
0°-60°	8080.3	86.2
0°-90°	9370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4773	4773	4773	4773	4773	
5°	4690	4685	4685	4679	4679	445
15°	4387	4387	4343	4298	4282	1233
25°	3802	3780	3719	3587	3487	1745
35°	3084	3062	2913	2693	2626	1928
45°	2367	2318	2119	1942	1865	1823
55°	1644	1595	1446	1275	1208	1475
65°	977	922	833	850	706	963
75°	392	364	342	326	359	420
85°	55	61	66	72	77	77
90°	0	0	0	0	0	



TEST NUMBER: P562549

CATALOG NUMBER: FSR-24-4-LD4-2HI-40-UNV-80-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4773.0	4773.0	4773.0	4773.0	4773.0
2.5°	4739.8	4739.8	4739.8	4734.3	4734.3
5°	4690.2	4684.7	4684.7	4679.1	4679.1
7.5°	4651.6	4646.0	4640.5	4635.0	4624.0
10°	4596.4	4596.4	4590.9	4563.3	4557.8
12.5°	4508.1	4502.6	4480.5	4441.9	4430.8
15°	4386.7	4386.7	4342.6	4298.4	4281.9
17.5°	4254.3	4248.8	4193.6	4149.4	4127.4
20°	4110.8	4099.8	4044.6	3972.9	3934.2
22.5°	3950.8	3950.8	3884.6	3790.8	3752.1
25°	3801.8	3779.7	3719.0	3586.6	3487.3
27.5°	3630.8	3597.6	3531.4	3343.8	3228.0
30°	3443.1	3426.6	3332.8	3090.0	3001.7
32.5°	3266.6	3239.0	3139.7	2885.8	2814.1
35°	3084.5	3062.4	2913.4	2692.7	2626.5
37.5°	2902.4	2874.8	2687.2	2510.6	2427.9
40°	2720.3	2687.2	2483.0	2323.0	2234.7
42.5°	2549.3	2505.1	2306.5	2135.4	2036.1
45°	2367.2	2317.5	2118.9	1942.3	1865.0
47.5°	2185.1	2140.9	1958.8	1776.8	1688.5
50°	1991.9	1953.3	1787.8	1605.7	1511.9
52.5°	1831.9	1771.2	1611.2	1429.1	1351.9
55°	1644.3	1594.7	1445.7	1274.6	1208.4
57.5°	1473.3	1423.6	1285.7	1125.6	1070.5
60°	1313.3	1241.5	1125.6	987.7	943.6
62.5°	1136.7	1081.5	982.2	866.3	921.5
65°	976.7	921.5	833.2	849.8	706.3
67.5°	800.1	772.5	695.3	618.0	595.9
70°	651.1	618.0	590.4	507.6	485.6
72.5°	518.7	485.6	446.9	402.8	386.3
75°	391.8	364.2	342.1	325.6	358.7
77.5°	270.4	259.3	242.8	226.2	220.7
80°	176.6	171.1	165.5	160.0	154.5
82.5°	104.8	104.8	104.8	104.8	104.8
85°	55.2	60.7	66.2	71.7	77.3
87.5°	33.1	33.1	38.6	44.1	49.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)