

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: P562186

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562186
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-LD4-1LO-40-UNV-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2355.0 lumens
Efficiency: N/A
Efficacy: 100.6 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

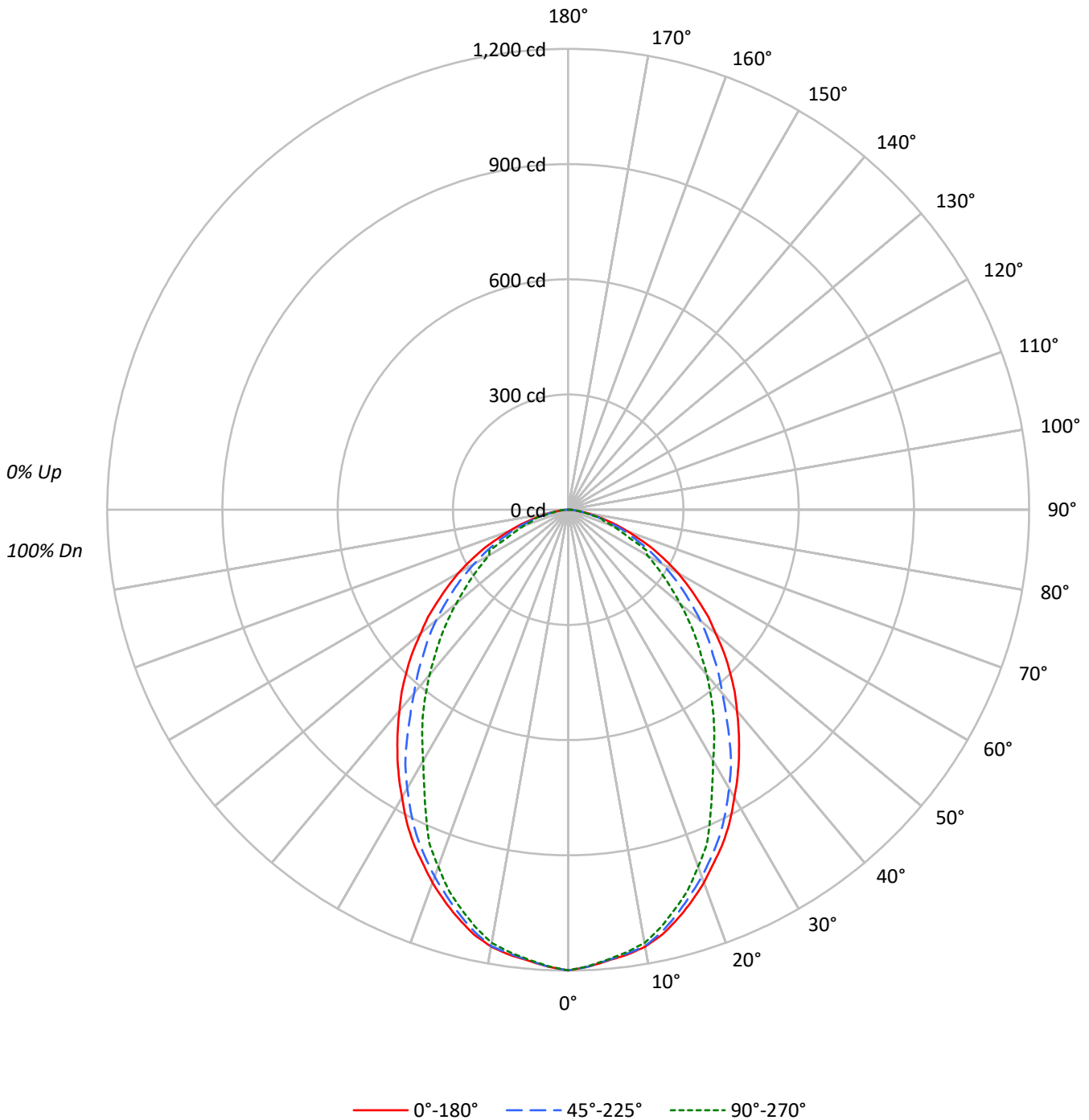
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562186

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-81-94-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562186

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-81-94-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°	1614	1614	1614
5°	1592	1590	1588
10°	1578	1576	1565
15°	1536	1520	1499
20°	1479	1455	1416
25°	1419	1388	1301
30°	1345	1301	1172
35°	1273	1203	1084
40°	1201	1096	987
45°	1132	1013	892
50°	1048	940	795
55°	970	852	712
60°	888	761	638
65°	782	667	565
70°	644	584	480
75°	512	447	468
80°	344	322	301
85°	215	256	299

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1132 cd/sqm



TEST NUMBER: P562186

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-81-94-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	4.7
10°-20°	306.5	13.0
20°-30°	424.3	18.0
30°-40°	452.4	19.2
40°-50°	412.7	17.5
50°-60°	323.3	13.7
60°-70°	210.7	8.9
70°-80°	93.4	4.0
80°-90°	20.0	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°	842.4	35.8
0°-40°	1294.8	55.0
0°-60°	2030.8	86.2
0°-90°	2355.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2355.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1200	1200	1200	1200	1200	
5°	1179	1177	1177	1176	1176	112
15°	1102	1102	1091	1080	1076	310
25°	956	950	935	901	876	439
35°	775	770	732	677	660	485
45°	595	582	532	488	469	458
55°	413	401	363	320	304	371
65°	246	232	209	214	178	242
75°	98	92	86	82	90	106
85°	14	15	17	18	19	19
90°	0	0	0	0	0	



TEST NUMBER: P562186

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-81-94-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1199.6	1199.6	1199.6	1199.6	1199.6
2.5°	1191.3	1191.3	1191.3	1189.9	1189.9
5°	1178.8	1177.4	1177.4	1176.0	1176.0
7.5°	1169.1	1167.7	1166.3	1164.9	1162.2
10°	1155.2	1155.2	1153.8	1146.9	1145.5
12.5°	1133.0	1131.7	1126.1	1116.4	1113.6
15°	1102.5	1102.5	1091.4	1080.3	1076.2
17.5°	1069.2	1067.9	1054.0	1042.9	1037.3
20°	1033.2	1030.4	1016.5	998.5	988.8
22.5°	993.0	993.0	976.3	952.8	943.0
25°	955.5	950.0	934.7	901.4	876.5
27.5°	912.5	904.2	887.6	840.4	811.3
30°	865.4	861.2	837.6	776.6	754.4
32.5°	821.0	814.1	789.1	725.3	707.3
35°	775.2	769.7	732.2	676.8	660.1
37.5°	729.5	722.5	675.4	631.0	610.2
40°	683.7	675.4	624.1	583.9	561.7
42.5°	640.7	629.6	579.7	536.7	511.7
45°	594.9	582.5	532.5	488.2	468.7
47.5°	549.2	538.1	492.3	446.6	424.4
50°	500.6	490.9	449.3	403.6	380.0
52.5°	460.4	445.2	405.0	359.2	339.8
55°	413.3	400.8	363.3	320.4	303.7
57.5°	370.3	357.8	323.1	282.9	269.0
60°	330.1	312.0	282.9	248.2	237.1
62.5°	285.7	271.8	246.9	217.7	231.6
65°	245.5	231.6	209.4	213.6	177.5
67.5°	201.1	194.2	174.7	155.3	149.8
70°	163.6	155.3	148.4	127.6	122.0
72.5°	130.4	122.0	112.3	101.2	97.1
75°	98.5	91.5	86.0	81.8	90.1
77.5°	68.0	65.2	61.0	56.9	55.5
80°	44.4	43.0	41.6	40.2	38.8
82.5°	26.3	26.3	26.3	26.3	26.3
85°	13.9	15.3	16.6	18.0	19.4
87.5°	8.3	8.3	9.7	11.1	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)