

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: P563523

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563523
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-LD4-3STD-40-UNV-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11010.0 lumens
Efficiency: N/A
Efficacy: 110.2 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

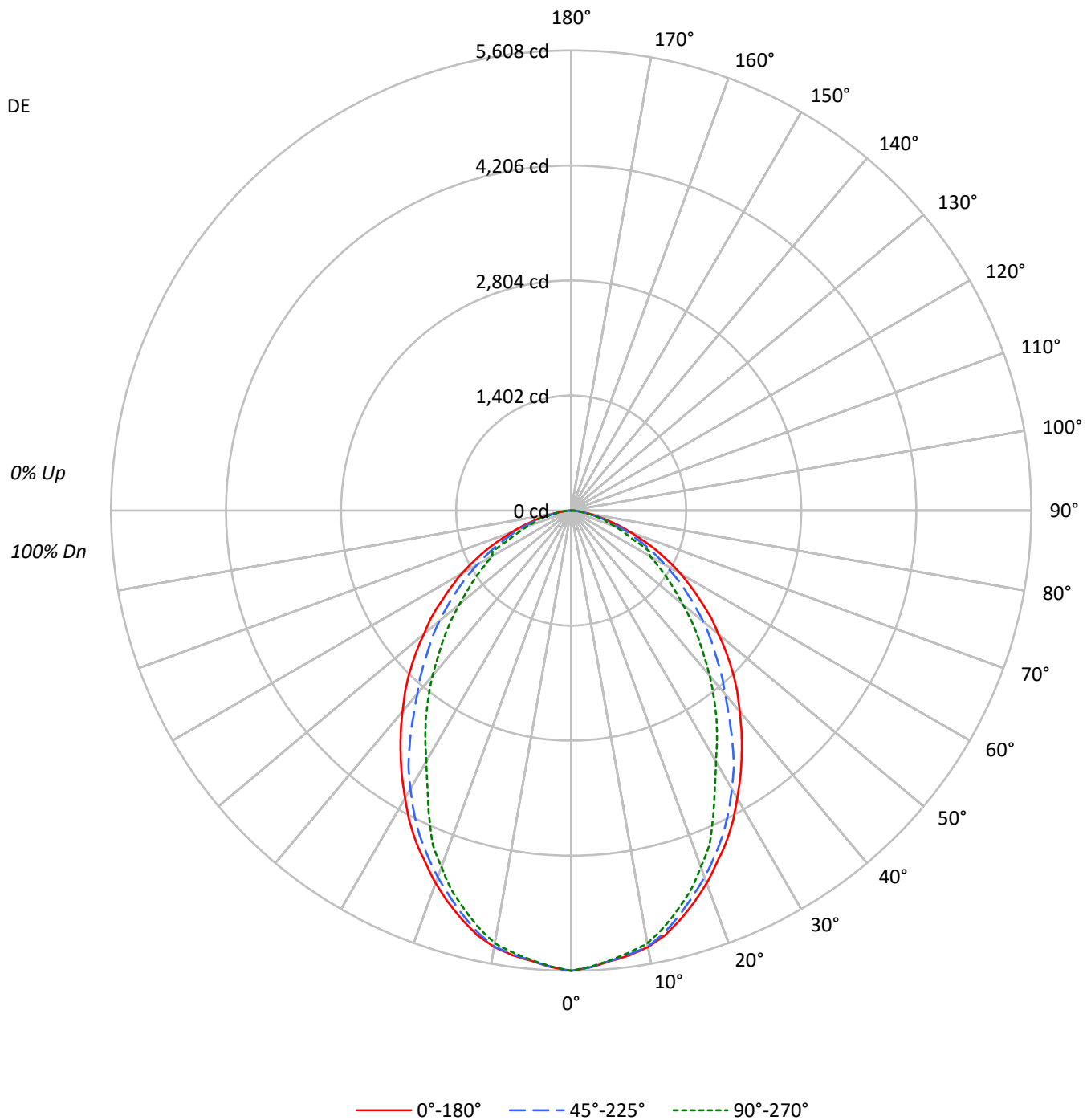
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563523

CATALOG NUMBER: FSR-24-4-LD4-3STD-40-UNV-81-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563523

CATALOG NUMBER: FSR-24-4-LD4-3STD-40-UNV-81-85-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	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°	7546	7546	7546
5°	7443	7435	7426
10°	7379	7370	7317
15°	7180	7108	7008
20°	6916	6805	6619
25°	6632	6488	6083
30°	6286	6084	5480
35°	5953	5623	5069
40°	5614	5125	4612
45°	5293	4737	4170
50°	4899	4397	3719
55°	4532	3985	3331
60°	4152	3559	2983
65°	3654	3117	2642
70°	3010	2729	2245
75°	2393	2090	2191
80°	1608	1507	1406
85°	1000	1201	1402

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5293 cd/sqm



TEST NUMBER: P563523

CATALOG NUMBER: FSR-24-4-LD4-3STD-40-UNV-81-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	522.1	4.7
10°-20°	1432.8	13.0
20°-30°	1983.6	18.0
30°-40°	2115.0	19.2
40°-50°	1929.5	17.5
50°-60°	1511.6	13.7
60°-70°	985.2	8.9
70°-80°	436.5	4.0
80°-90°	93.7	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°	3938.4	35.8
0°-40°	6053.4	55.0
0°-60°	9494.6	86.2
0°-90°	11010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11010.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5608	5608	5608	5608	5608	
5°	5511	5505	5505	5498	5498	523
15°	5154	5154	5103	5051	5031	1449
25°	4467	4441	4370	4214	4098	2051
35°	3624	3598	3423	3164	3086	2266
45°	2782	2723	2490	2282	2192	2143
55°	1932	1874	1699	1498	1420	1733
65°	1148	1083	979	998	830	1131
75°	460	428	402	382	421	493
85°	65	71	78	84	91	90
90°	0	0	0	0	0	



TEST NUMBER: P563523

CATALOG NUMBER: FSR-24-4-LD4-3STD-40-UNV-81-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5608.3	5608.3	5608.3	5608.3	5608.3
2.5°	5569.4	5569.4	5569.4	5563.0	5563.0
5°	5511.1	5504.6	5504.6	5498.1	5498.1
7.5°	5465.7	5459.2	5452.7	5446.3	5433.3
10°	5400.9	5400.9	5394.4	5362.0	5355.5
12.5°	5297.1	5290.6	5264.7	5219.3	5206.4
15°	5154.5	5154.5	5102.6	5050.8	5031.3
17.5°	4998.9	4992.4	4927.6	4875.7	4849.8
20°	4830.3	4817.3	4752.5	4668.2	4622.8
22.5°	4642.3	4642.3	4564.5	4454.3	4408.9
25°	4467.2	4441.3	4370.0	4214.4	4097.7
27.5°	4266.2	4227.3	4149.5	3929.1	3792.9
30°	4045.8	4026.3	3916.1	3630.8	3527.1
32.5°	3838.3	3805.9	3689.2	3390.9	3306.7
35°	3624.4	3598.4	3423.4	3164.0	3086.2
37.5°	3410.4	3378.0	3157.5	2950.1	2852.8
40°	3196.4	3157.5	2917.6	2729.6	2625.9
42.5°	2995.4	2943.6	2710.2	2509.2	2392.5
45°	2781.5	2723.1	2489.7	2282.2	2191.5
47.5°	2567.5	2515.7	2301.7	2087.7	1984.0
50°	2340.6	2295.2	2100.7	1886.7	1776.5
52.5°	2152.6	2081.2	1893.2	1679.3	1588.5
55°	1932.1	1873.8	1698.7	1497.7	1419.9
57.5°	1731.1	1672.8	1510.7	1322.7	1257.8
60°	1543.1	1458.8	1322.7	1160.6	1108.7
62.5°	1335.6	1270.8	1154.1	1017.9	1082.8
65°	1147.6	1082.8	979.0	998.5	829.9
67.5°	940.1	907.7	816.9	726.2	700.2
70°	765.1	726.2	693.7	596.5	570.6
72.5°	609.5	570.6	525.2	473.3	453.9
75°	460.3	427.9	402.0	382.5	421.4
77.5°	317.7	304.7	285.3	265.8	259.3
80°	207.5	201.0	194.5	188.0	181.5
82.5°	123.2	123.2	123.2	123.2	123.2
85°	64.8	71.3	77.8	84.3	90.8
87.5°	38.9	38.9	45.4	51.9	58.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)