

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: P562998

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562998
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-LD4-2STD-50-UNV-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6539.0 lumens
Efficiency: N/A
Efficacy: 98.2 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

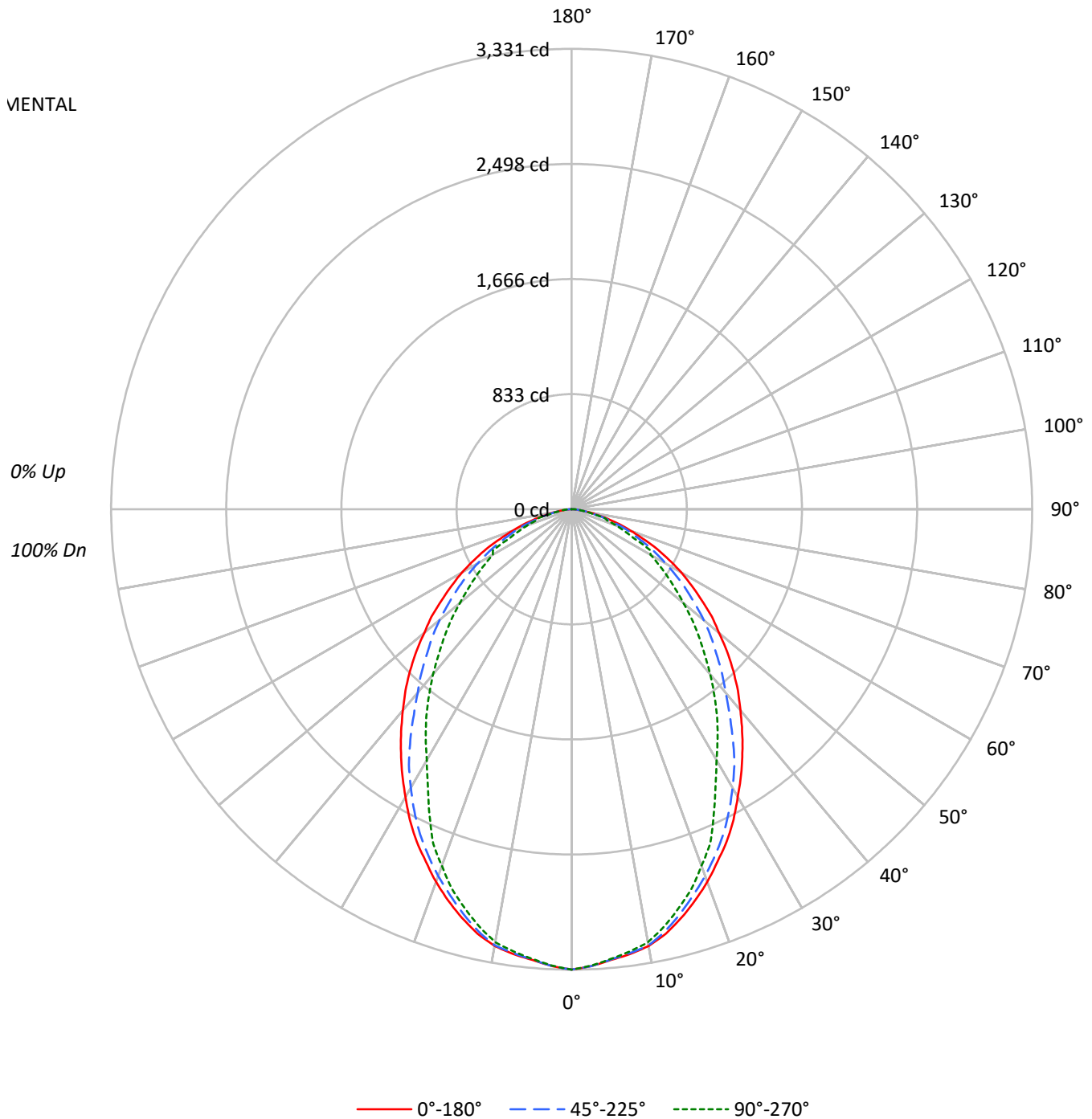
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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°	4482	4482	4482
5°	4421	4416	4410
10°	4383	4377	4346
15°	4264	4221	4162
20°	4108	4042	3931
25°	3939	3853	3613
30°	3733	3613	3255
35°	3536	3340	3011
40°	3334	3044	2739
45°	3143	2814	2477
50°	2910	2611	2209
55°	2692	2367	1978
60°	2466	2114	1772
65°	2170	1851	1569
70°	1788	1621	1333
75°	1421	1241	1301
80°	955	895	835
85°	594	713	832

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3143 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.1	4.7
10°-20°	850.9	13.0
20°-30°	1178.1	18.0
30°-40°	1256.2	19.2
40°-50°	1146.0	17.5
50°-60°	897.8	13.7
60°-70°	585.1	8.9
70°-80°	259.2	4.0
80°-90°	55.7	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°	2339.1	35.8
0°-40°	3595.2	55.0
0°-60°	5639.0	86.2
0°-90°	6539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3331	3331	3331	3331	3331	
5°	3273	3269	3269	3265	3265	311
15°	3061	3061	3030	3000	2988	861
25°	2653	2638	2595	2503	2434	1218
35°	2153	2137	2033	1879	1833	1346
45°	1652	1617	1479	1356	1302	1272
55°	1148	1113	1009	890	843	1029
65°	682	643	582	593	493	672
75°	273	254	239	227	250	293
85°	38	42	46	50	54	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3330.9	3330.9	3330.9	3330.9	3330.9
2.5°	3307.8	3307.8	3307.8	3303.9	3303.9
5°	3273.1	3269.3	3269.3	3265.4	3265.4
7.5°	3246.2	3242.3	3238.5	3234.6	3226.9
10°	3207.7	3207.7	3203.8	3184.6	3180.7
12.5°	3146.0	3142.2	3126.8	3099.8	3092.1
15°	3061.3	3061.3	3030.5	2999.7	2988.2
17.5°	2968.9	2965.1	2926.6	2895.7	2880.3
20°	2868.8	2861.1	2822.6	2772.5	2745.6
22.5°	2757.1	2757.1	2710.9	2645.4	2618.5
25°	2653.2	2637.7	2595.4	2503.0	2433.7
27.5°	2533.8	2510.7	2464.5	2333.5	2252.7
30°	2402.9	2391.3	2325.8	2156.4	2094.8
32.5°	2279.6	2260.4	2191.1	2013.9	1963.9
35°	2152.6	2137.2	2033.2	1879.2	1832.9
37.5°	2025.5	2006.2	1875.3	1752.1	1694.3
40°	1898.4	1875.3	1732.8	1621.2	1559.5
42.5°	1779.0	1748.2	1609.6	1490.2	1420.9
45°	1652.0	1617.3	1478.7	1355.5	1301.5
47.5°	1524.9	1494.1	1367.0	1239.9	1178.3
50°	1390.1	1363.2	1247.6	1120.6	1055.1
52.5°	1278.4	1236.1	1124.4	997.3	943.4
55°	1147.5	1112.9	1008.9	889.5	843.3
57.5°	1028.1	993.5	897.2	785.5	747.0
60°	916.5	866.4	785.5	689.3	658.5
62.5°	793.2	754.7	685.4	604.6	643.1
65°	681.6	643.1	581.5	593.0	492.9
67.5°	558.4	539.1	485.2	431.3	415.9
70°	454.4	431.3	412.0	354.3	338.9
72.5°	362.0	338.9	311.9	281.1	269.6
75°	273.4	254.1	238.7	227.2	250.3
77.5°	188.7	181.0	169.4	157.9	154.0
80°	123.2	119.4	115.5	111.7	107.8
82.5°	73.2	73.2	73.2	73.2	73.2
85°	38.5	42.4	46.2	50.1	53.9
87.5°	23.1	23.1	27.0	30.8	34.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)