

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: P563347

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563347
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-LD4-3LO-40-UNV-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 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: 8049.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

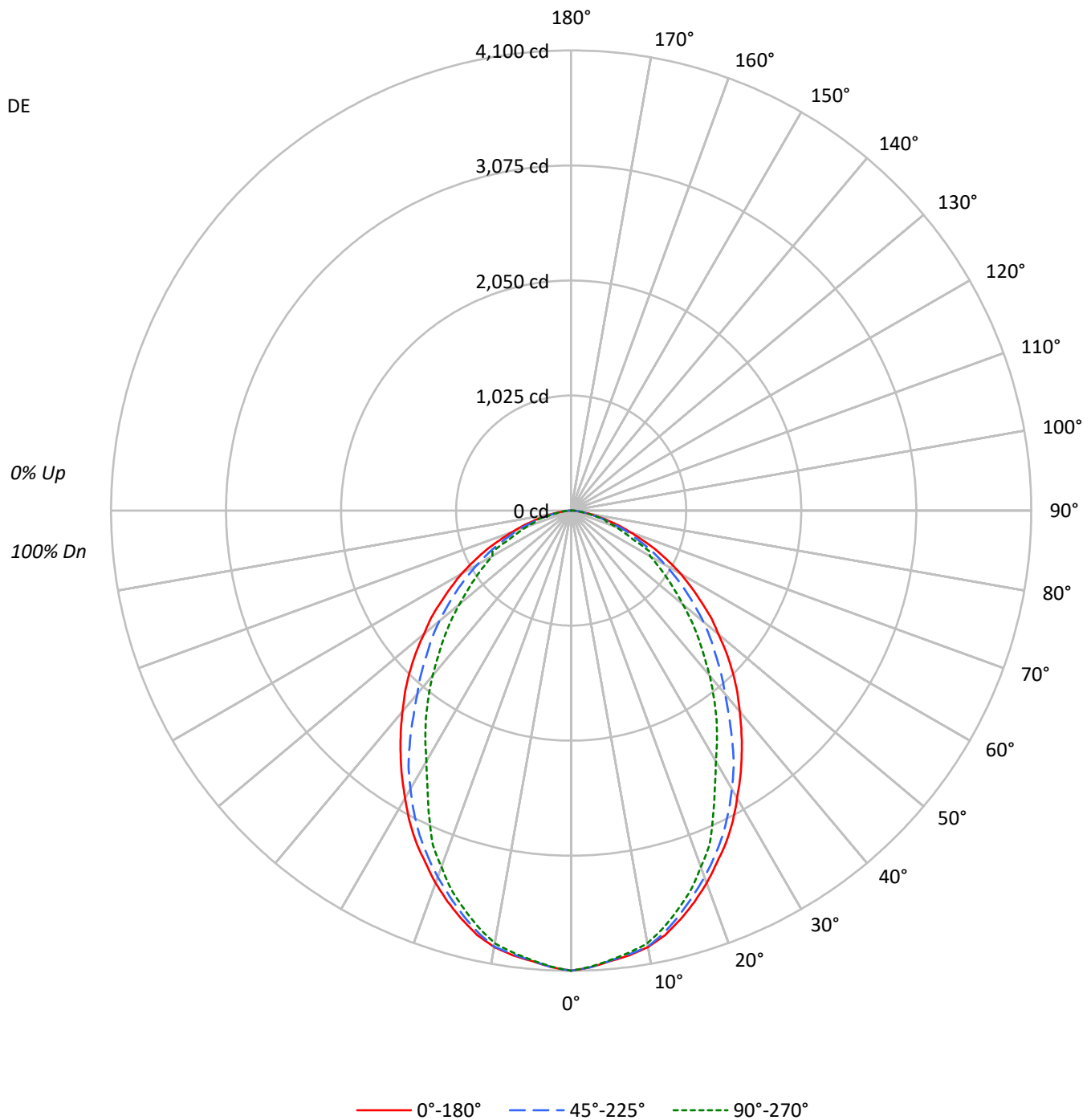
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5517	5517	5517
5°	5442	5435	5429
10°	5394	5388	5349
15°	5249	5196	5124
20°	5056	4975	4839
25°	4848	4743	4447
30°	4595	4448	4006
35°	4352	4111	3706
40°	4104	3746	3372
45°	3869	3463	3048
50°	3582	3215	2718
55°	3313	2913	2435
60°	3036	2602	2181
65°	2671	2279	1932
70°	2200	1995	1641
75°	1749	1528	1602
80°	1175	1102	1028
85°	732	878	1025

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3869 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	381.7	4.7
10°-20°	1047.4	13.0
20°-30°	1450.1	18.0
30°-40°	1546.2	19.2
40°-50°	1410.6	17.5
50°-60°	1105.1	13.7
60°-70°	720.3	8.9
70°-80°	319.1	4.0
80°-90°	68.5	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°	2879.2	35.8
0°-40°	4425.4	55.0
0°-60°	6941.1	86.2
0°-90°	8049.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8049.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4100	4100	4100	4100	4100	
5°	4029	4024	4024	4020	4020	382
15°	3768	3768	3730	3692	3678	1059
25°	3266	3247	3195	3081	2996	1499
35°	2650	2631	2503	2313	2256	1656
45°	2033	1991	1820	1668	1602	1566
55°	1412	1370	1242	1095	1038	1267
65°	839	792	716	730	607	827
75°	336	313	294	280	308	361
85°	47	52	57	62	66	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4100.1	4100.1	4100.1	4100.1	4100.1
2.5°	4071.6	4071.6	4071.6	4066.9	4066.9
5°	4029.0	4024.2	4024.2	4019.5	4019.5
7.5°	3995.8	3991.0	3986.3	3981.6	3972.1
10°	3948.4	3948.4	3943.6	3919.9	3915.2
12.5°	3872.5	3867.8	3848.8	3815.7	3806.2
15°	3768.3	3768.3	3730.3	3692.4	3678.2
17.5°	3654.5	3649.8	3602.4	3564.4	3545.5
20°	3531.3	3521.8	3474.4	3412.8	3379.6
22.5°	3393.8	3393.8	3336.9	3256.3	3223.2
25°	3265.8	3246.9	3194.7	3081.0	2995.6
27.5°	3118.9	3090.4	3033.6	2872.4	2772.9
30°	2957.7	2943.5	2862.9	2654.4	2578.5
32.5°	2806.0	2782.3	2697.0	2479.0	2417.4
35°	2649.6	2630.7	2502.7	2313.1	2256.2
37.5°	2493.2	2469.5	2308.4	2156.7	2085.6
40°	2336.8	2308.4	2133.0	1995.5	1919.7
42.5°	2189.9	2151.9	1981.3	1834.4	1749.0
45°	2033.4	1990.8	1820.1	1668.5	1602.1
47.5°	1877.0	1839.1	1682.7	1526.3	1450.4
50°	1711.1	1677.9	1535.7	1379.3	1298.7
52.5°	1573.7	1521.5	1384.1	1227.6	1161.3
55°	1412.5	1369.8	1241.9	1094.9	1038.0
57.5°	1265.6	1222.9	1104.4	966.9	919.5
60°	1128.1	1066.5	966.9	848.5	810.5
62.5°	976.4	929.0	843.7	744.2	791.6
65°	839.0	791.6	715.7	730.0	606.7
67.5°	687.3	663.6	597.2	530.9	511.9
70°	559.3	530.9	507.2	436.1	417.1
72.5°	445.6	417.1	383.9	346.0	331.8
75°	336.5	312.8	293.9	279.7	308.1
77.5°	232.3	222.8	208.6	194.3	189.6
80°	151.7	146.9	142.2	137.5	132.7
82.5°	90.1	90.1	90.1	90.1	90.1
85°	47.4	52.1	56.9	61.6	66.4
87.5°	28.4	28.4	33.2	37.9	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)