

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: P563030

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563030
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-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6082.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

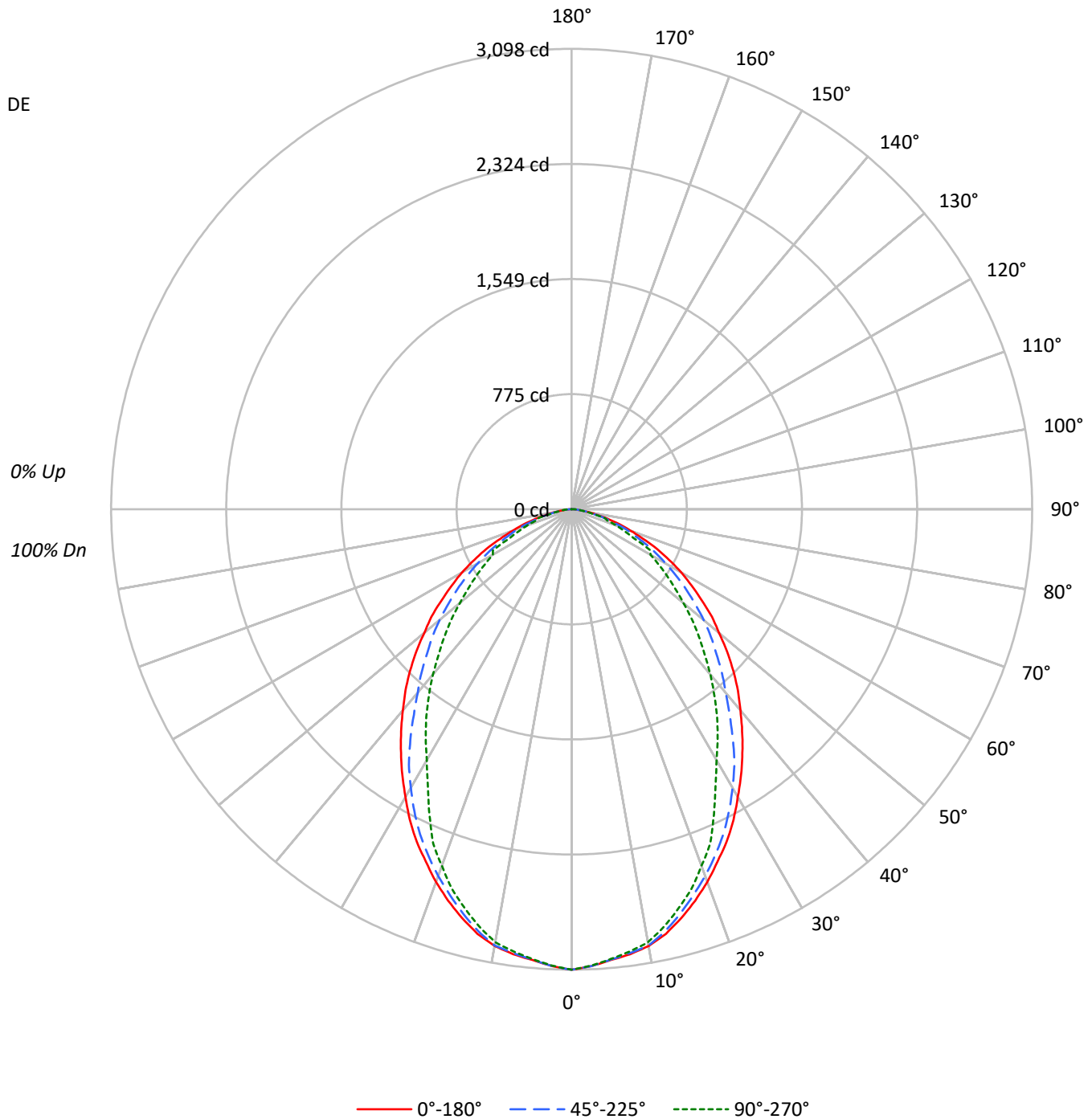
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4168	4168	4168
5°	4112	4107	4102
10°	4076	4071	4042
15°	3966	3926	3871
20°	3821	3759	3656
25°	3664	3584	3361
30°	3472	3361	3027
35°	3289	3106	2800
40°	3101	2831	2548
45°	2924	2617	2304
50°	2707	2429	2054
55°	2504	2201	1840
60°	2294	1966	1648
65°	2018	1722	1459
70°	1662	1507	1240
75°	1322	1155	1210
80°	888	832	777
85°	553	664	773

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2924 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.4	4.7
10°-20°	791.5	13.0
20°-30°	1095.7	18.0
30°-40°	1168.4	19.2
40°-50°	1065.9	17.5
50°-60°	835.0	13.7
60°-70°	544.2	8.9
70°-80°	241.1	4.0
80°-90°	51.8	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°	2175.6	35.8
0°-40°	3343.9	55.0
0°-60°	5244.9	86.2
0°-90°	6082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6082.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3098	3098	3098	3098	3098	
5°	3044	3041	3041	3037	3037	289
15°	2847	2847	2819	2790	2779	800
25°	2468	2453	2414	2328	2264	1133
35°	2002	1988	1891	1748	1705	1252
45°	1536	1504	1375	1261	1211	1184
55°	1067	1035	938	827	784	957
65°	634	598	541	552	458	625
75°	254	236	222	211	233	273
85°	36	39	43	47	50	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3098.1	3098.1	3098.1	3098.1	3098.1
2.5°	3076.6	3076.6	3076.6	3073.0	3073.0
5°	3044.4	3040.8	3040.8	3037.2	3037.2
7.5°	3019.3	3015.7	3012.1	3008.5	3001.4
10°	2983.5	2983.5	2979.9	2962.0	2958.4
12.5°	2926.2	2922.6	2908.3	2883.2	2876.0
15°	2847.4	2847.4	2818.7	2790.1	2779.3
17.5°	2761.4	2757.8	2722.0	2693.4	2679.0
20°	2668.3	2661.1	2625.3	2578.8	2553.7
22.5°	2564.4	2564.4	2521.5	2460.6	2435.5
25°	2467.7	2453.4	2414.0	2328.0	2263.6
27.5°	2356.7	2335.2	2292.2	2170.5	2095.2
30°	2234.9	2224.2	2163.3	2005.7	1948.4
32.5°	2120.3	2102.4	2037.9	1873.2	1826.6
35°	2002.1	1987.8	1891.1	1747.8	1704.8
37.5°	1883.9	1866.0	1744.2	1629.6	1575.9
40°	1765.7	1744.2	1611.7	1507.9	1450.6
42.5°	1654.7	1626.0	1497.1	1386.1	1321.6
45°	1536.5	1504.3	1375.3	1260.7	1210.6
47.5°	1418.3	1389.7	1271.5	1153.3	1096.0
50°	1293.0	1267.9	1160.4	1042.2	981.4
52.5°	1189.1	1149.7	1045.8	927.6	877.5
55°	1067.3	1035.1	938.4	827.4	784.4
57.5°	956.3	924.1	834.5	730.6	694.8
60°	852.4	805.9	730.6	641.1	612.5
62.5°	737.8	702.0	637.5	562.3	598.1
65°	633.9	598.1	540.8	551.6	458.4
67.5°	519.3	501.4	451.3	401.1	386.8
70°	422.6	401.1	383.2	329.5	315.2
72.5°	336.7	315.2	290.1	261.5	250.7
75°	254.3	236.4	222.1	211.3	232.8
77.5°	175.5	168.3	157.6	146.8	143.3
80°	114.6	111.0	107.4	103.9	100.3
82.5°	68.1	68.1	68.1	68.1	68.1
85°	35.8	39.4	43.0	46.6	50.1
87.5°	21.5	21.5	25.1	28.7	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)