

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: P562948

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562948
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-40-UNV-81-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6098.0 lumens
Efficiency: N/A
Efficacy: 91.6 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

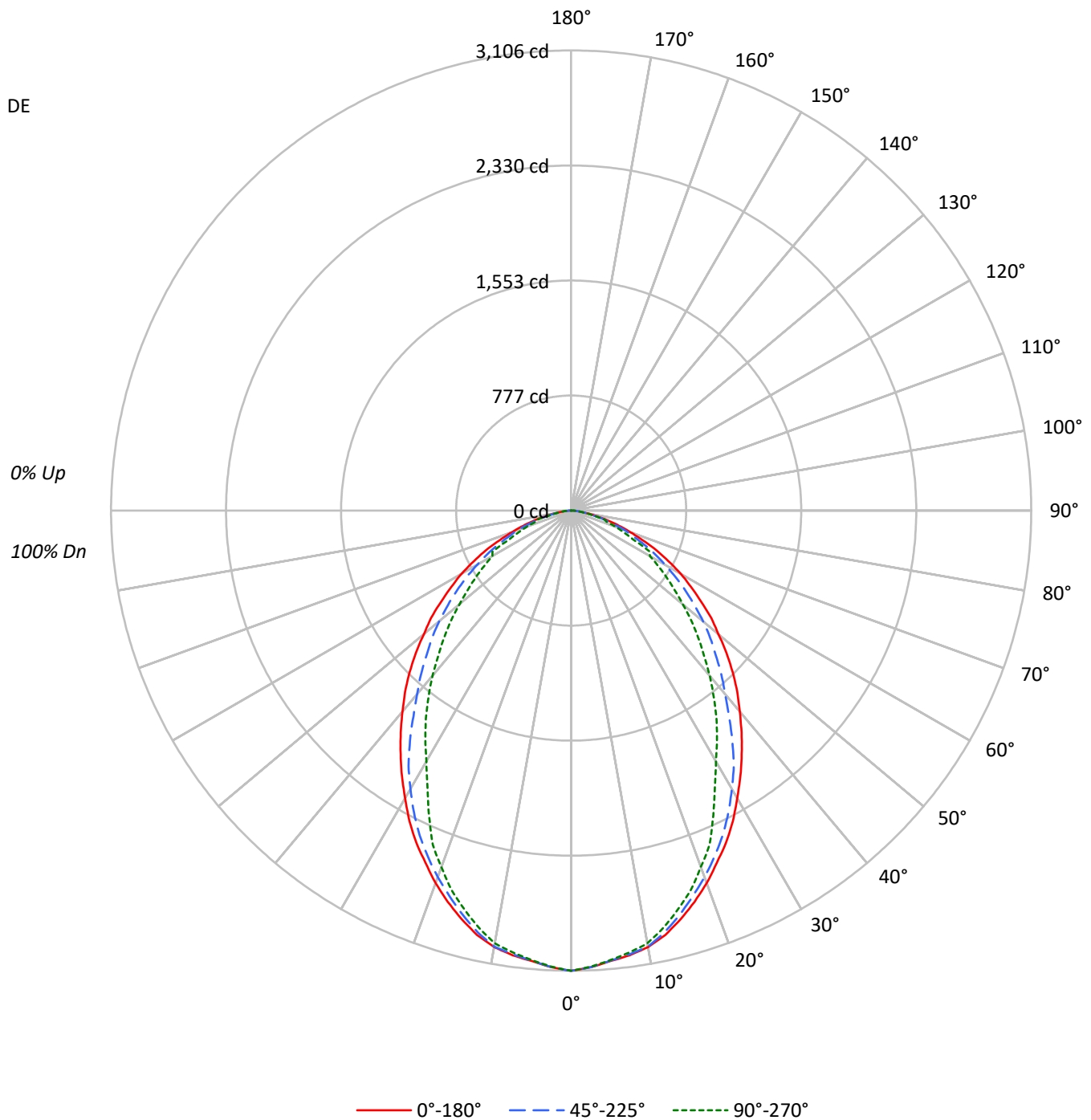
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4179	4179	4179
5°	4123	4118	4113
10°	4087	4082	4053
15°	3977	3937	3882
20°	3831	3769	3666
25°	3673	3593	3369
30°	3481	3370	3035
35°	3297	3114	2808
40°	3110	2838	2555
45°	2931	2624	2310
50°	2714	2435	2060
55°	2510	2207	1845
60°	2300	1971	1653
65°	2024	1726	1464
70°	1667	1511	1243
75°	1326	1157	1213
80°	890	834	779
85°	554	665	777

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2931 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.1	4.7
10°-20°	793.5	13.0
20°-30°	1098.6	18.0
30°-40°	1171.4	19.2
40°-50°	1068.7	17.5
50°-60°	837.2	13.7
60°-70°	545.7	8.9
70°-80°	241.7	4.0
80°-90°	51.9	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°	2181.3	35.8
0°-40°	3352.7	55.0
0°-60°	5258.7	86.2
0°-90°	6098.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6098.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3106	3106	3106	3106	3106	
5°	3052	3049	3049	3045	3045	290
15°	2855	2855	2826	2797	2787	803
25°	2474	2460	2420	2334	2270	1136
35°	2007	1993	1896	1752	1709	1255
45°	1541	1508	1379	1264	1214	1187
55°	1070	1038	941	830	786	960
65°	636	600	542	553	460	626
75°	255	237	223	212	233	273
85°	36	40	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°	3106.2	3106.2	3106.2	3106.2	3106.2
2.5°	3084.7	3084.7	3084.7	3081.1	3081.1
5°	3052.4	3048.8	3048.8	3045.2	3045.2
7.5°	3027.2	3023.6	3020.1	3016.5	3009.3
10°	2991.3	2991.3	2987.7	2969.8	2966.2
12.5°	2933.9	2930.3	2915.9	2890.8	2883.6
15°	2854.9	2854.9	2826.1	2797.4	2786.6
17.5°	2768.7	2765.1	2729.2	2700.5	2686.1
20°	2675.3	2668.1	2632.2	2585.5	2560.4
22.5°	2571.2	2571.2	2528.1	2467.0	2441.9
25°	2474.2	2459.9	2420.4	2334.2	2269.5
27.5°	2362.9	2341.4	2298.3	2176.2	2100.8
30°	2240.8	2230.0	2169.0	2011.0	1953.5
32.5°	2125.9	2107.9	2043.3	1878.1	1831.4
35°	2007.4	1993.0	1896.1	1752.4	1709.3
37.5°	1888.9	1870.9	1748.8	1633.9	1580.1
40°	1770.4	1748.8	1616.0	1511.8	1454.4
42.5°	1659.1	1630.3	1501.0	1389.7	1325.1
45°	1540.6	1508.2	1379.0	1264.0	1213.8
47.5°	1422.0	1393.3	1274.8	1156.3	1098.9
50°	1296.4	1271.2	1163.5	1045.0	983.9
52.5°	1192.2	1152.7	1048.6	930.1	879.8
55°	1070.1	1037.8	940.8	829.5	786.4
57.5°	958.8	926.5	836.7	732.6	696.7
60°	854.7	808.0	732.6	642.8	614.1
62.5°	739.8	703.8	639.2	563.8	599.7
65°	635.6	599.7	542.2	553.0	459.7
67.5°	520.7	502.7	452.5	402.2	387.8
70°	423.7	402.2	384.2	330.4	316.0
72.5°	337.6	316.0	290.9	262.1	251.4
75°	255.0	237.0	222.6	211.9	233.4
77.5°	176.0	168.8	158.0	147.2	143.6
80°	114.9	111.3	107.7	104.1	100.5
82.5°	68.2	68.2	68.2	68.2	68.2
85°	35.9	39.5	43.1	46.7	50.3
87.5°	21.5	21.5	25.1	28.7	32.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)