

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: P563336

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563336
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-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5951.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

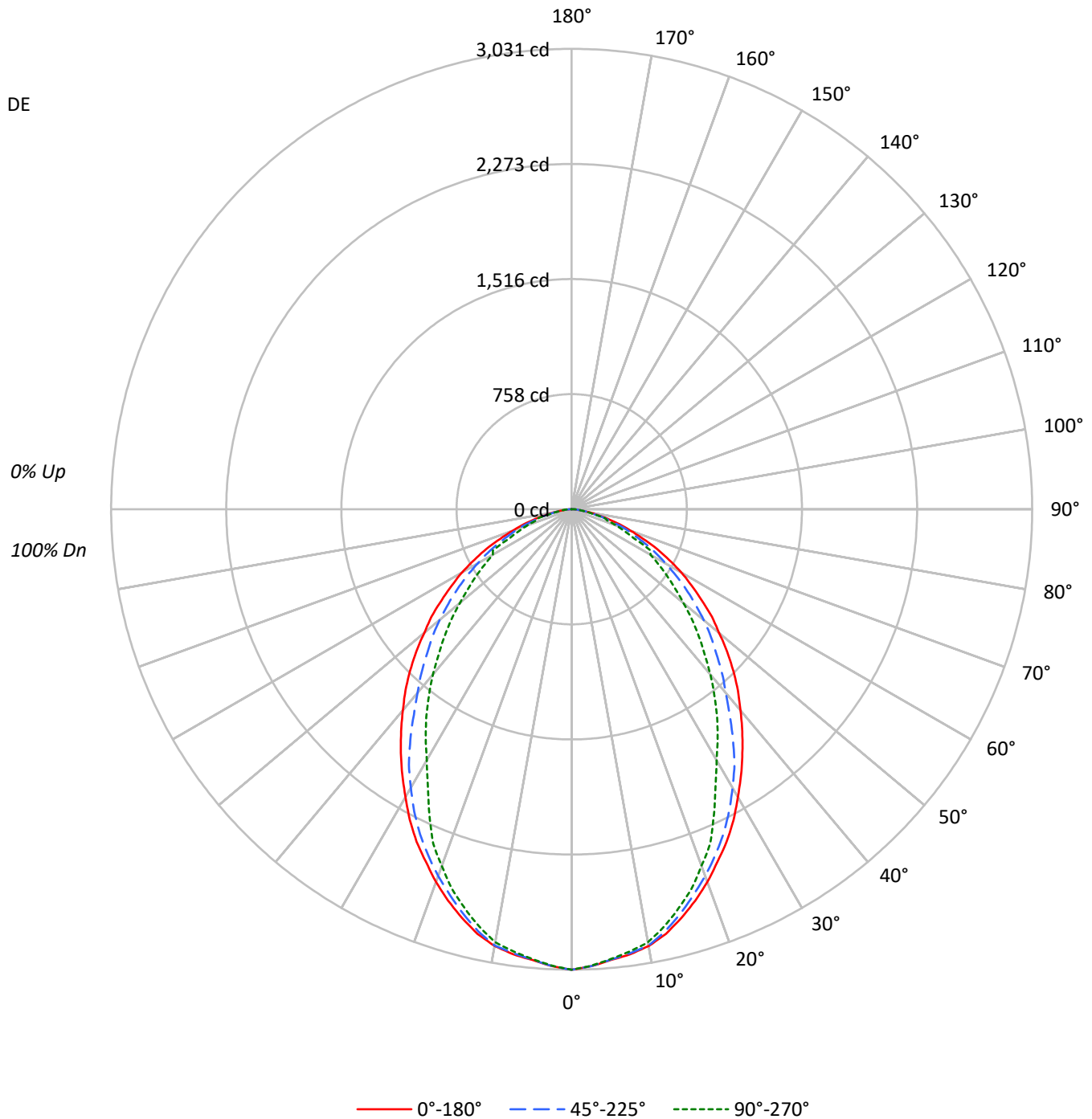
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4079	4079	4079
5°	4023	4019	4014
10°	3988	3984	3955
15°	3881	3842	3788
20°	3738	3678	3578
25°	3585	3507	3288
30°	3397	3289	2962
35°	3218	3039	2740
40°	3035	2770	2493
45°	2861	2561	2254
50°	2648	2377	2010
55°	2450	2154	1800
60°	2245	1924	1613
65°	1975	1685	1428
70°	1627	1475	1213
75°	1293	1130	1184
80°	869	814	760
85°	540	650	758

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2861 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.2	4.7
10°-20°	774.4	13.0
20°-30°	1072.1	18.0
30°-40°	1143.2	19.2
40°-50°	1042.9	17.5
50°-60°	817.1	13.7
60°-70°	532.5	8.9
70°-80°	235.9	4.0
80°-90°	50.6	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°	2128.7	35.8
0°-40°	3271.9	55.0
0°-60°	5131.9	86.2
0°-90°	5951.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5951.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3031	3031	3031	3031	3031	
5°	2979	2975	2975	2972	2972	283
15°	2786	2786	2758	2730	2720	783
25°	2415	2401	2362	2278	2215	1109
35°	1959	1945	1850	1710	1668	1225
45°	1503	1472	1346	1234	1184	1158
55°	1044	1013	918	810	768	937
65°	620	585	529	540	449	611
75°	249	231	217	207	228	267
85°	35	38	42	46	49	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3031.4	3031.4	3031.4	3031.4	3031.4
2.5°	3010.3	3010.3	3010.3	3006.8	3006.8
5°	2978.8	2975.3	2975.3	2971.8	2971.8
7.5°	2954.3	2950.8	2947.3	2943.7	2936.7
10°	2919.2	2919.2	2915.7	2898.2	2894.7
12.5°	2863.1	2859.6	2845.6	2821.1	2814.1
15°	2786.0	2786.0	2758.0	2730.0	2719.5
17.5°	2701.9	2698.4	2663.4	2635.4	2621.3
20°	2610.8	2603.8	2568.8	2523.2	2498.7
22.5°	2509.2	2509.2	2467.1	2407.6	2383.0
25°	2414.6	2400.6	2362.0	2277.9	2214.8
27.5°	2305.9	2284.9	2242.9	2123.7	2050.1
30°	2186.8	2176.3	2116.7	1962.5	1906.4
32.5°	2074.6	2057.1	1994.0	1832.8	1787.3
35°	1959.0	1945.0	1850.4	1710.2	1668.1
37.5°	1843.3	1825.8	1706.7	1594.5	1542.0
40°	1727.7	1706.7	1577.0	1475.4	1419.3
42.5°	1619.1	1591.0	1464.9	1356.2	1293.1
45°	1503.4	1471.9	1345.7	1233.6	1184.5
47.5°	1387.8	1359.7	1244.1	1128.4	1072.4
50°	1265.1	1240.6	1135.4	1019.8	960.2
52.5°	1163.5	1124.9	1023.3	907.7	858.6
55°	1044.3	1012.8	918.2	809.5	767.5
57.5°	935.7	904.2	816.5	714.9	679.9
60°	834.1	788.5	714.9	627.3	599.3
62.5°	721.9	686.9	623.8	550.2	585.2
65°	620.3	585.2	529.2	539.7	448.6
67.5°	508.1	490.6	441.6	392.5	378.5
70°	413.5	392.5	375.0	322.4	308.4
72.5°	329.4	308.4	283.9	255.8	245.3
75°	248.8	231.3	217.3	206.8	227.8
77.5°	171.7	164.7	154.2	143.7	140.2
80°	112.1	108.6	105.1	101.6	98.1
82.5°	66.6	66.6	66.6	66.6	66.6
85°	35.0	38.5	42.1	45.6	49.1
87.5°	21.0	21.0	24.5	28.0	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)