

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: P562735

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562735
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-LD4-2LO-35-UNV-93-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

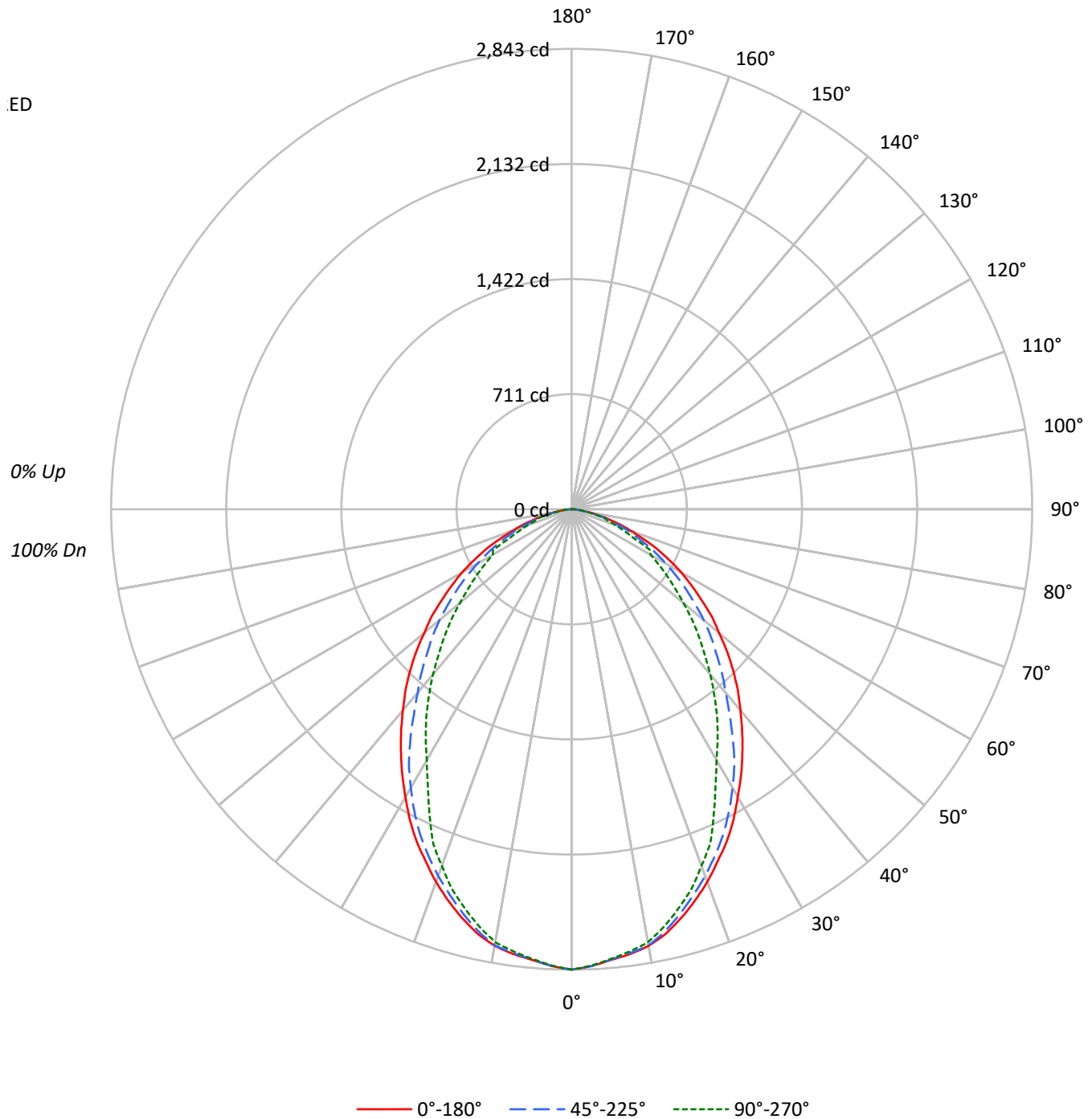
Lumens per Lamp: N/A
Luminaire Lumens: 5581.0 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	3825	3825	3825
5°	3773	3769	3764
10°	3740	3736	3709
15°	3640	3603	3553
20°	3506	3449	3355
25°	3362	3289	3084
30°	3186	3084	2778
35°	3018	2850	2570
40°	2846	2598	2338
45°	2683	2401	2114
50°	2484	2229	1885
55°	2297	2020	1688
60°	2105	1804	1512
65°	1852	1580	1339
70°	1526	1384	1138
75°	1213	1059	1110
80°	815	764	713
85°	508	608	710

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2683 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.6	4.7
10°-20°	726.3	13.0
20°-30°	1005.5	18.0
30°-40°	1072.1	19.2
40°-50°	978.1	17.5
50°-60°	766.3	13.7
60°-70°	499.4	8.9
70°-80°	221.3	4.0
80°-90°	47.5	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°	1996.4	35.8
0°-40°	3068.5	55.0
0°-60°	4812.8	86.2
0°-90°	5581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2843	2843	2843	2843	2843	
5°	2794	2790	2790	2787	2787	265
15°	2613	2613	2586	2560	2550	735
25°	2264	2251	2215	2136	2077	1040
35°	1837	1824	1735	1604	1564	1149
45°	1410	1380	1262	1157	1111	1086
55°	979	950	861	759	720	878
65°	582	549	496	506	421	573
75°	233	217	204	194	214	250
85°	33	36	39	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2842.9	2842.9	2842.9	2842.9	2842.9
2.5°	2823.2	2823.2	2823.2	2819.9	2819.9
5°	2793.6	2790.3	2790.3	2787.0	2787.0
7.5°	2770.6	2767.3	2764.0	2760.7	2754.1
10°	2737.7	2737.7	2734.4	2718.0	2714.7
12.5°	2685.1	2681.8	2668.7	2645.7	2639.1
15°	2612.8	2612.8	2586.5	2560.2	2550.4
17.5°	2533.9	2530.7	2497.8	2471.5	2458.4
20°	2448.5	2441.9	2409.1	2366.3	2343.3
22.5°	2353.2	2353.2	2313.7	2257.9	2234.9
25°	2264.4	2251.3	2215.2	2136.3	2077.1
27.5°	2162.6	2142.8	2103.4	1991.7	1922.6
30°	2050.8	2041.0	1985.1	1840.5	1787.9
32.5°	1945.7	1929.2	1870.1	1718.9	1676.2
35°	1837.2	1824.0	1735.3	1603.8	1564.4
37.5°	1728.7	1712.3	1600.6	1495.4	1446.1
40°	1620.3	1600.6	1479.0	1383.6	1331.1
42.5°	1518.4	1492.1	1373.8	1271.9	1212.7
45°	1409.9	1380.4	1262.0	1156.9	1110.9
47.5°	1301.5	1275.2	1166.7	1058.3	1005.7
50°	1186.5	1163.4	1064.9	956.4	900.5
52.5°	1091.1	1055.0	959.7	851.2	805.2
55°	979.4	949.8	861.1	759.2	719.8
57.5°	877.5	847.9	765.8	670.5	637.6
60°	782.2	739.5	670.5	588.3	562.0
62.5°	677.0	644.2	585.0	516.0	548.9
65°	581.7	548.9	496.3	506.1	420.7
67.5°	476.6	460.1	414.1	368.1	355.0
70°	387.8	368.1	351.7	302.4	289.2
72.5°	308.9	289.2	266.2	239.9	230.1
75°	233.3	216.9	203.8	193.9	213.6
77.5°	161.0	154.5	144.6	134.7	131.5
80°	105.2	101.9	98.6	95.3	92.0
82.5°	62.4	62.4	62.4	62.4	62.4
85°	32.9	36.2	39.4	42.7	46.0
87.5°	19.7	19.7	23.0	26.3	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)