

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: P562789

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562789
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-40-UNV-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5716.0 lumens
Efficiency: N/A
Efficacy: 122.1 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

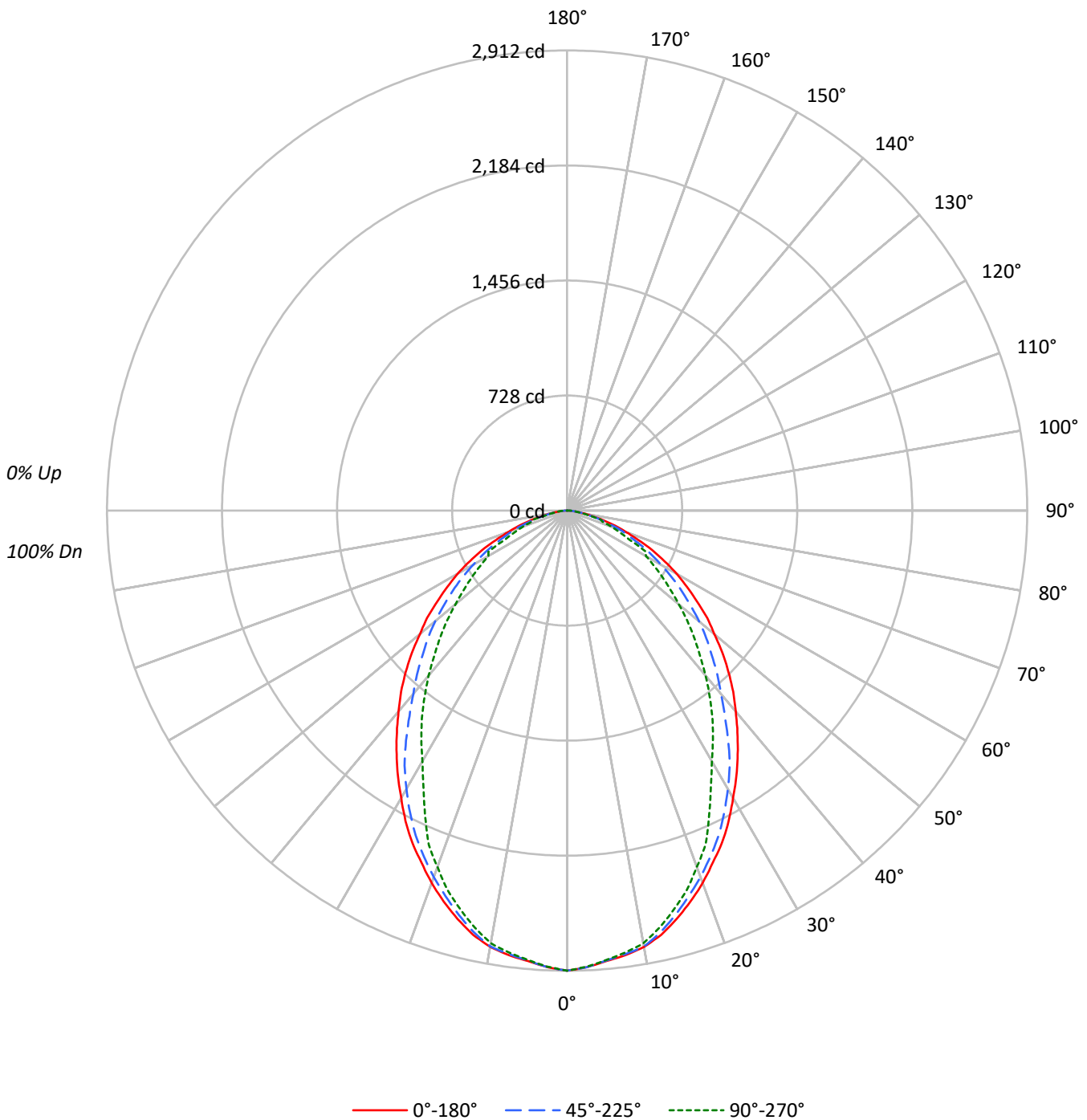
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3918	3918	3918
5°	3864	3860	3855
10°	3831	3826	3799
15°	3728	3690	3639
20°	3591	3533	3436
25°	3443	3368	3158
30°	3263	3159	2845
35°	3091	2919	2632
40°	2915	2660	2395
45°	2748	2460	2165
50°	2544	2283	1931
55°	2353	2069	1729
60°	2156	1848	1549
65°	1897	1618	1372
70°	1563	1417	1165
75°	1242	1085	1137
80°	834	783	731
85°	520	624	727

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2748 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.0	4.7
10°-20°	743.8	13.0
20°-30°	1029.8	18.0
30°-40°	1098.1	19.2
40°-50°	1001.8	17.5
50°-60°	784.8	13.7
60°-70°	511.5	8.9
70°-80°	226.6	4.0
80°-90°	48.7	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°	2044.7	35.8
0°-40°	3142.7	55.0
0°-60°	4929.3	86.2
0°-90°	5716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5716.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2912	2912	2912	2912	2912	
5°	2861	2858	2858	2854	2854	272
15°	2676	2676	2649	2622	2612	752
25°	2319	2306	2269	2188	2127	1065
35°	1882	1868	1777	1643	1602	1176
45°	1444	1414	1293	1185	1138	1112
55°	1003	973	882	778	737	900
65°	596	562	508	518	431	587
75°	239	222	209	199	219	256
85°	34	37	40	44	47	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2911.7	2911.7	2911.7	2911.7	2911.7
2.5°	2891.5	2891.5	2891.5	2888.1	2888.1
5°	2861.2	2857.8	2857.8	2854.4	2854.4
7.5°	2837.6	2834.2	2830.9	2827.5	2820.8
10°	2803.9	2803.9	2800.6	2783.7	2780.4
12.5°	2750.1	2746.7	2733.3	2709.7	2703.0
15°	2676.0	2676.0	2649.1	2622.2	2612.1
17.5°	2595.2	2591.9	2558.2	2531.3	2517.8
20°	2507.7	2501.0	2467.3	2423.6	2400.0
22.5°	2410.1	2410.1	2369.7	2312.5	2288.9
25°	2319.2	2305.8	2268.7	2187.9	2127.4
27.5°	2214.9	2194.7	2154.3	2039.8	1969.2
30°	2100.4	2090.3	2033.1	1885.0	1831.1
32.5°	1992.7	1975.9	1915.3	1760.5	1716.7
35°	1881.6	1868.2	1777.3	1642.6	1602.3
37.5°	1770.6	1753.7	1639.3	1531.6	1481.1
40°	1659.5	1639.3	1514.7	1417.1	1363.3
42.5°	1555.1	1528.2	1407.0	1302.7	1242.1
45°	1444.0	1413.8	1292.6	1184.9	1137.7
47.5°	1333.0	1306.0	1195.0	1083.9	1030.0
50°	1215.2	1191.6	1090.6	979.5	922.3
52.5°	1117.5	1080.5	982.9	871.8	824.7
55°	1003.1	972.8	881.9	777.6	737.2
57.5°	898.7	868.4	784.3	686.7	653.0
60°	801.1	757.4	686.7	602.5	575.6
62.5°	693.4	659.8	599.2	528.5	562.1
65°	595.8	562.1	508.3	518.4	430.9
67.5°	488.1	471.3	424.1	377.0	363.5
70°	397.2	377.0	360.2	309.7	296.2
72.5°	316.4	296.2	272.7	245.7	235.6
75°	239.0	222.2	208.7	198.6	218.8
77.5°	164.9	158.2	148.1	138.0	134.6
80°	107.7	104.3	101.0	97.6	94.3
82.5°	64.0	64.0	64.0	64.0	64.0
85°	33.7	37.0	40.4	43.8	47.1
87.5°	20.2	20.2	23.6	26.9	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)