

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: P562144

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562144
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-LD4-1HI-50-UNV-93-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4286.0 lumens
Efficiency: N/A
Efficacy: 99.2 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

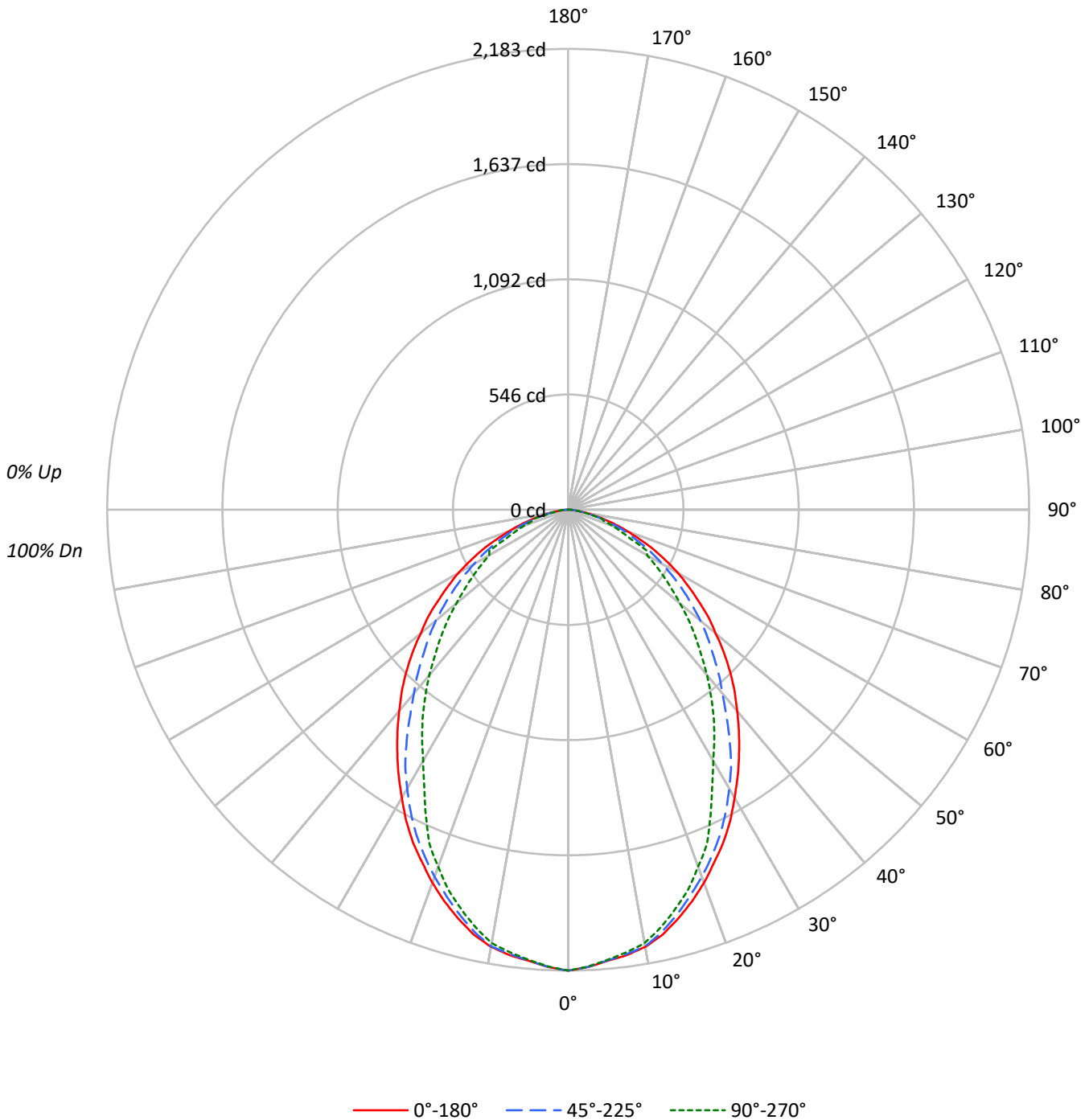
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2937	2937	2937
5°	2898	2894	2891
10°	2873	2869	2848
15°	2795	2767	2728
20°	2692	2649	2577
25°	2582	2526	2368
30°	2447	2369	2133
35°	2317	2189	1973
40°	2186	1995	1795
45°	2060	1844	1623
50°	1907	1712	1448
55°	1764	1551	1297
60°	1616	1386	1161
65°	1422	1213	1029
70°	1172	1063	874
75°	932	814	853
80°	626	587	548
85°	389	468	545

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2060 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.2	4.7
10°-20°	557.8	13.0
20°-30°	772.2	18.0
30°-40°	823.4	19.2
40°-50°	751.1	17.5
50°-60°	588.5	13.7
60°-70°	383.5	8.9
70°-80°	169.9	4.0
80°-90°	36.5	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°	1533.1	35.8
0°-40°	2356.5	55.0
0°-60°	3696.1	86.2
0°-90°	4286.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4286.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2183	2183	2183	2183	2183	
5°	2145	2143	2143	2140	2140	204
15°	2007	2007	1986	1966	1959	564
25°	1739	1729	1701	1641	1595	798
35°	1411	1401	1333	1232	1201	882
45°	1083	1060	969	888	853	834
55°	752	729	661	583	553	675
65°	447	422	381	389	323	440
75°	179	167	156	149	164	192
85°	25	28	30	33	35	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2183.2	2183.2	2183.2	2183.2	2183.2
2.5°	2168.1	2168.1	2168.1	2165.6	2165.6
5°	2145.4	2142.8	2142.8	2140.3	2140.3
7.5°	2127.7	2125.2	2122.7	2120.1	2115.1
10°	2102.5	2102.5	2099.9	2087.3	2084.8
12.5°	2062.1	2059.6	2049.5	2031.8	2026.7
15°	2006.6	2006.6	1986.4	1966.2	1958.6
17.5°	1946.0	1943.5	1918.2	1898.0	1887.9
20°	1880.4	1875.3	1850.1	1817.3	1799.6
22.5°	1807.2	1807.2	1776.9	1734.0	1716.3
25°	1739.0	1728.9	1701.2	1640.6	1595.1
27.5°	1660.8	1645.6	1615.3	1529.5	1476.5
30°	1575.0	1567.4	1524.5	1413.4	1373.0
32.5°	1494.2	1481.6	1436.1	1320.0	1287.2
35°	1410.9	1400.8	1332.7	1231.7	1201.4
37.5°	1327.6	1315.0	1229.2	1148.4	1110.5
40°	1244.3	1229.2	1135.8	1062.6	1022.2
42.5°	1166.1	1145.9	1055.0	976.8	931.3
45°	1082.8	1060.1	969.2	888.4	853.1
47.5°	999.5	979.3	896.0	812.7	772.3
50°	911.2	893.5	817.8	734.5	691.6
52.5°	838.0	810.2	737.0	653.7	618.4
55°	752.1	729.4	661.3	583.0	552.7
57.5°	673.9	651.2	588.1	514.9	489.6
60°	600.7	567.9	514.9	451.8	431.6
62.5°	519.9	494.7	449.3	396.3	421.5
65°	446.7	421.5	381.1	388.7	323.1
67.5°	366.0	353.4	318.0	282.7	272.6
70°	297.8	282.7	270.1	232.2	222.1
72.5°	237.3	222.1	204.4	184.2	176.7
75°	179.2	166.6	156.5	148.9	164.1
77.5°	123.7	118.6	111.1	103.5	101.0
80°	80.8	78.2	75.7	73.2	70.7
82.5°	48.0	48.0	48.0	48.0	48.0
85°	25.2	27.8	30.3	32.8	35.3
87.5°	15.1	15.1	17.7	20.2	22.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)