

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: P562087

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562087
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-40-UNV-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4542.0 lumens
Efficiency: N/A
Efficacy: 105.1 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

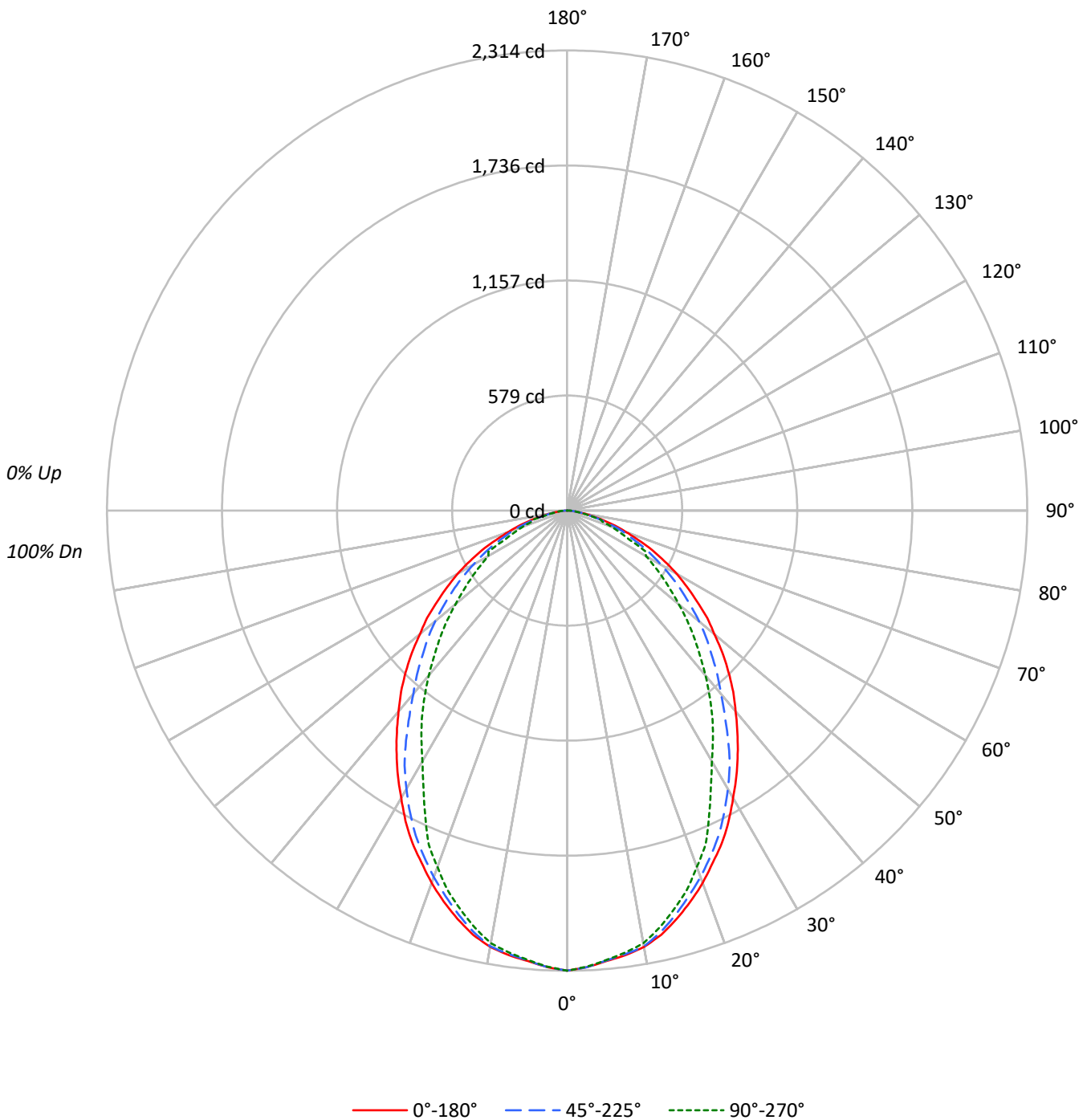
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3113	3113	3113
5°	3071	3067	3063
10°	3044	3040	3018
15°	2962	2932	2891
20°	2853	2807	2731
25°	2736	2676	2510
30°	2593	2510	2261
35°	2456	2320	2091
40°	2316	2114	1903
45°	2183	1954	1720
50°	2021	1814	1534
55°	1870	1644	1374
60°	1713	1468	1231
65°	1507	1286	1090
70°	1242	1126	926
75°	987	862	904
80°	663	621	580
85°	412	496	577

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2183 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.4	4.7
10°-20°	591.1	13.0
20°-30°	818.3	18.0
30°-40°	872.5	19.2
40°-50°	796.0	17.5
50°-60°	623.6	13.7
60°-70°	406.4	8.9
70°-80°	180.1	4.0
80°-90°	38.6	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°	1624.7	35.8
0°-40°	2497.2	55.0
0°-60°	3916.9	86.2
0°-90°	4542.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4542.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2314	2314	2314	2314	2314	
5°	2274	2271	2271	2268	2268	216
15°	2126	2126	2105	2084	2076	598
25°	1843	1832	1803	1739	1690	846
35°	1495	1484	1412	1305	1273	935
45°	1148	1123	1027	942	904	884
55°	797	773	701	618	586	715
65°	473	447	404	412	342	467
75°	190	176	166	158	174	204
85°	27	29	32	35	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2313.6	2313.6	2313.6	2313.6	2313.6
2.5°	2297.6	2297.6	2297.6	2294.9	2294.9
5°	2273.5	2270.8	2270.8	2268.2	2268.2
7.5°	2254.8	2252.1	2249.4	2246.8	2241.4
10°	2228.0	2228.0	2225.4	2212.0	2209.3
12.5°	2185.2	2182.6	2171.9	2153.2	2147.8
15°	2126.4	2126.4	2105.0	2083.6	2075.6
17.5°	2062.2	2059.5	2032.8	2011.4	2000.7
20°	1992.7	1987.3	1960.6	1925.8	1907.1
22.5°	1915.1	1915.1	1883.0	1837.5	1818.8
25°	1842.9	1832.2	1802.8	1738.6	1690.4
27.5°	1760.0	1743.9	1711.8	1620.9	1564.7
30°	1669.0	1661.0	1615.5	1497.8	1455.0
32.5°	1583.4	1570.1	1521.9	1398.9	1364.1
35°	1495.2	1484.5	1412.3	1305.3	1273.2
37.5°	1406.9	1393.5	1302.6	1217.0	1176.9
40°	1318.6	1302.6	1203.6	1126.1	1083.3
42.5°	1235.7	1214.3	1118.0	1035.1	987.0
45°	1147.5	1123.4	1027.1	941.5	904.1
47.5°	1059.2	1037.8	949.5	861.3	818.5
50°	965.6	946.9	866.6	778.3	732.9
52.5°	888.0	858.6	781.0	692.8	655.3
55°	797.1	773.0	700.8	617.9	585.8
57.5°	714.2	690.1	623.2	545.6	518.9
60°	636.6	601.8	545.6	478.8	457.4
62.5°	551.0	524.2	476.1	419.9	446.7
65°	473.4	446.7	403.9	411.9	342.4
67.5°	387.8	374.5	337.0	299.6	288.9
70°	315.6	299.6	286.2	246.1	235.4
72.5°	251.4	235.4	216.7	195.3	187.2
75°	189.9	176.5	165.8	157.8	173.9
77.5°	131.1	125.7	117.7	109.7	107.0
80°	85.6	82.9	80.2	77.6	74.9
82.5°	50.8	50.8	50.8	50.8	50.8
85°	26.7	29.4	32.1	34.8	37.4
87.5°	16.0	16.0	18.7	21.4	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)