

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: P562031

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562031
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-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: 4584.0 lumens
Efficiency: N/A
Efficacy: 106.1 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

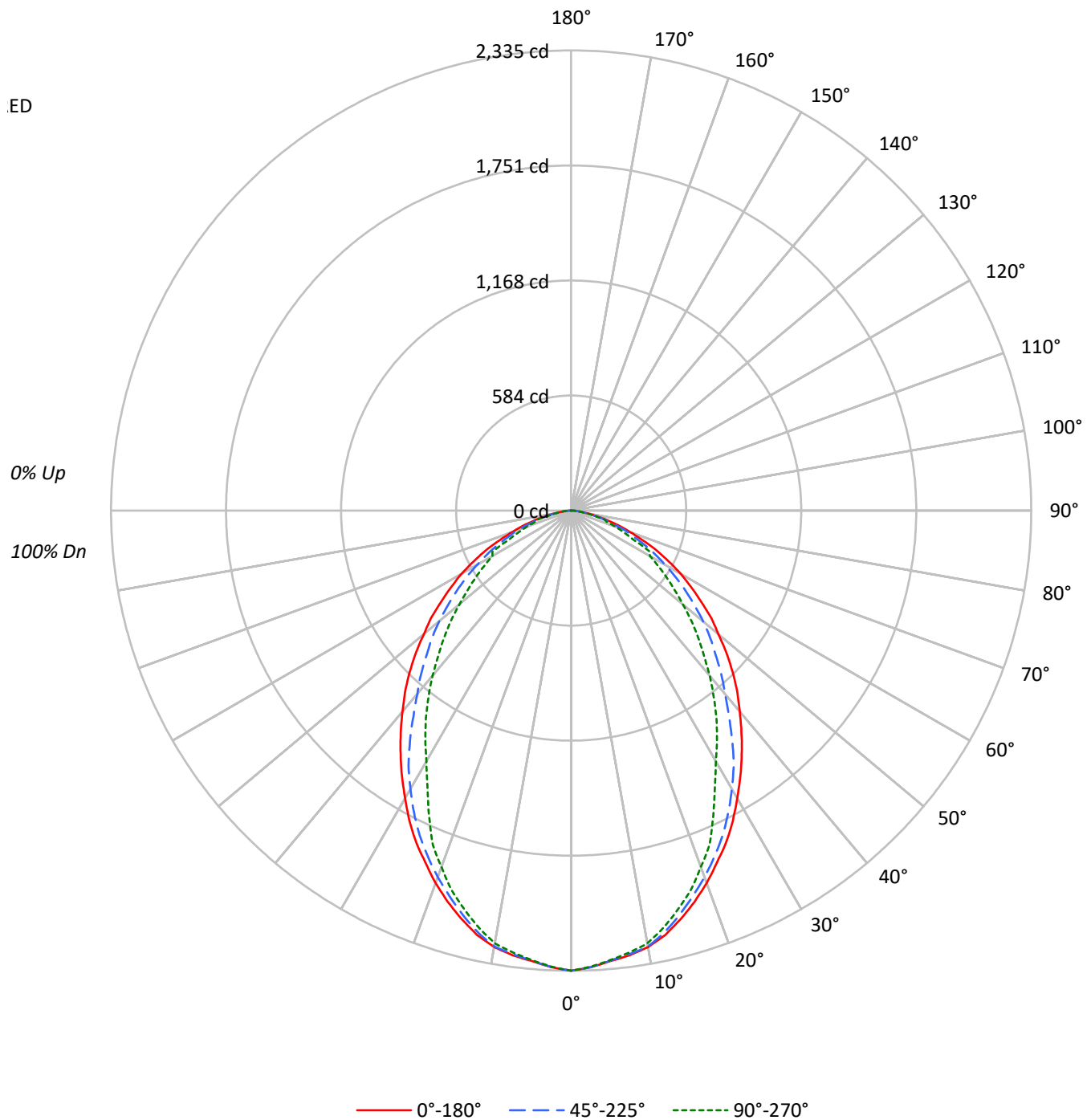
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3142	3142	3142
5°	3099	3095	3092
10°	3072	3068	3046
15°	2989	2959	2918
20°	2880	2833	2756
25°	2761	2701	2533
30°	2617	2533	2282
35°	2479	2341	2110
40°	2337	2134	1920
45°	2204	1972	1736
50°	2040	1831	1548
55°	1887	1659	1387
60°	1729	1482	1242
65°	1521	1298	1100
70°	1253	1136	935
75°	997	870	912
80°	669	628	586
85°	417	500	584

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2204 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.4	4.7
10°-20°	596.5	13.0
20°-30°	825.8	18.0
30°-40°	880.6	19.2
40°-50°	803.4	17.5
50°-60°	629.4	13.7
60°-70°	410.2	8.9
70°-80°	181.8	4.0
80°-90°	39.0	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°	1639.7	35.8
0°-40°	2520.3	55.0
0°-60°	3953.1	86.2
0°-90°	4584.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4584.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2335	2335	2335	2335	2335	
5°	2294	2292	2292	2289	2289	218
15°	2146	2146	2124	2103	2095	603
25°	1860	1849	1819	1755	1706	854
35°	1509	1498	1425	1317	1285	943
45°	1158	1134	1037	950	912	892
55°	804	780	707	624	591	722
65°	478	451	408	416	346	471
75°	192	178	167	159	176	205
85°	27	30	32	35	38	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2335.0	2335.0	2335.0	2335.0	2335.0
2.5°	2318.8	2318.8	2318.8	2316.1	2316.1
5°	2294.5	2291.8	2291.8	2289.1	2289.1
7.5°	2275.6	2272.9	2270.2	2267.5	2262.1
10°	2248.6	2248.6	2245.9	2232.4	2229.7
12.5°	2205.5	2202.8	2192.0	2173.1	2167.7
15°	2146.1	2146.1	2124.5	2102.9	2094.8
17.5°	2081.3	2078.6	2051.6	2030.0	2019.2
20°	2011.1	2005.7	1978.7	1943.6	1924.7
22.5°	1932.8	1932.8	1900.4	1854.5	1835.6
25°	1859.9	1849.1	1819.4	1754.6	1706.1
27.5°	1776.2	1760.0	1727.7	1635.9	1579.2
30°	1684.5	1676.4	1630.5	1511.7	1468.5
32.5°	1598.1	1584.6	1536.0	1411.8	1376.7
35°	1509.0	1498.2	1425.3	1317.3	1284.9
37.5°	1419.9	1406.4	1314.6	1228.3	1187.8
40°	1330.8	1314.6	1214.8	1136.5	1093.3
42.5°	1247.1	1225.6	1128.4	1044.7	996.1
45°	1158.1	1133.8	1036.6	950.2	912.4
47.5°	1069.0	1047.4	958.3	869.2	826.0
50°	974.5	955.6	874.6	785.5	739.7
52.5°	896.2	866.5	788.2	699.2	661.4
55°	804.4	780.1	707.3	623.6	591.2
57.5°	720.8	696.5	629.0	550.7	523.7
60°	642.5	607.4	550.7	483.2	461.6
62.5°	556.1	529.1	480.5	423.8	450.8
65°	477.8	450.8	407.6	415.7	345.5
67.5°	391.4	377.9	340.1	302.3	291.5
70°	318.5	302.3	288.8	248.3	237.6
72.5°	253.7	237.6	218.7	197.1	189.0
75°	191.7	178.2	167.4	159.3	175.5
77.5°	132.3	126.9	118.8	110.7	108.0
80°	86.4	83.7	81.0	78.3	75.6
82.5°	51.3	51.3	51.3	51.3	51.3
85°	27.0	29.7	32.4	35.1	37.8
87.5°	16.2	16.2	18.9	21.6	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)