

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: P562081

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562081
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-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4844.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

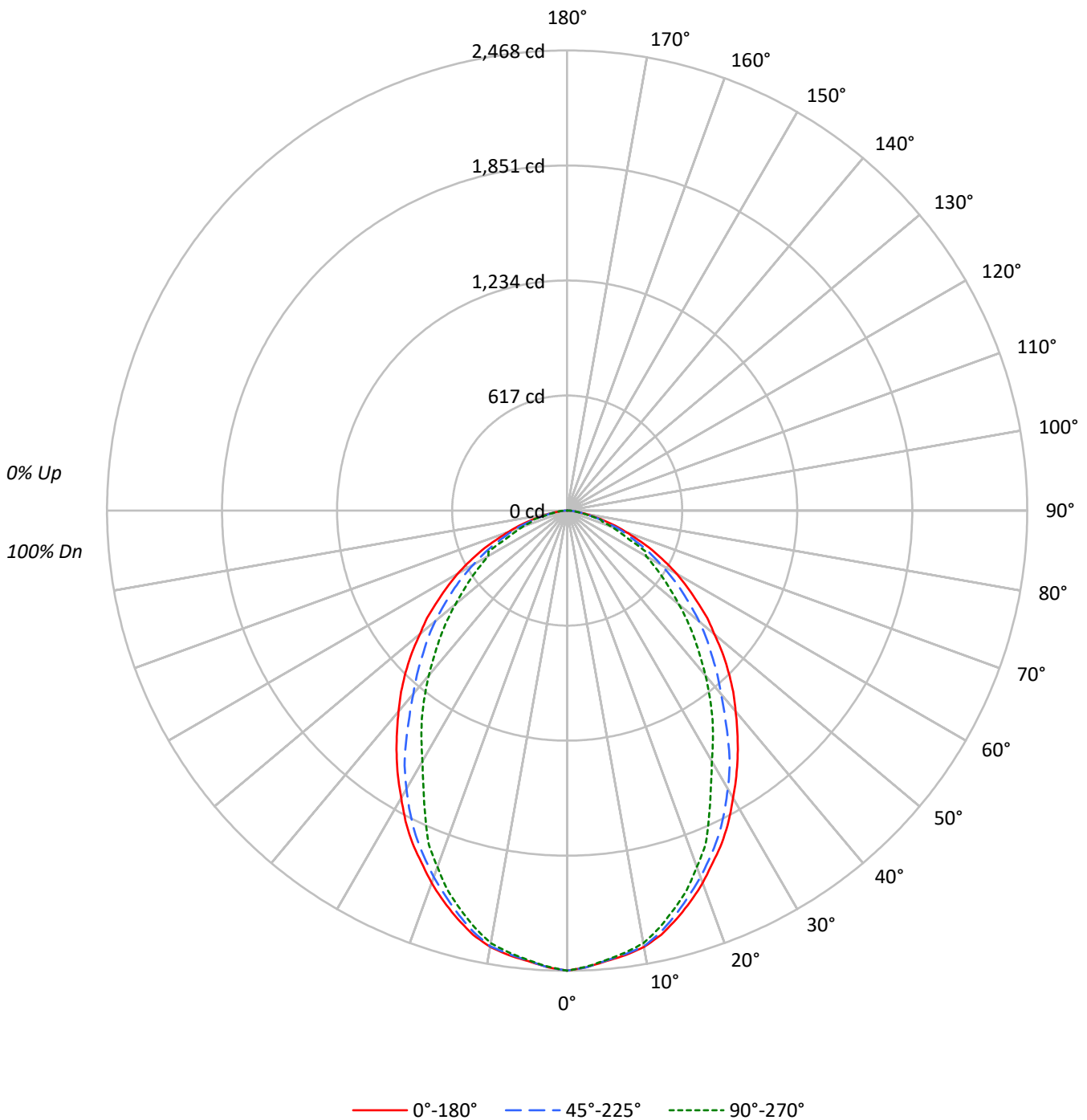
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3320	3320	3320
5°	3275	3271	3267
10°	3246	3243	3219
15°	3159	3127	3083
20°	3043	2994	2912
25°	2918	2854	2676
30°	2765	2677	2411
35°	2619	2474	2230
40°	2470	2255	2029
45°	2329	2084	1835
50°	2156	1935	1636
55°	1994	1753	1465
60°	1827	1566	1313
65°	1607	1371	1162
70°	1324	1201	987
75°	1053	920	964
80°	707	663	619
85°	440	528	616

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2329 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.7	4.7
10°-20°	630.4	13.0
20°-30°	872.7	18.0
30°-40°	930.5	19.2
40°-50°	848.9	17.5
50°-60°	665.1	13.7
60°-70°	433.5	8.9
70°-80°	192.0	4.0
80°-90°	41.2	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°	1732.7	35.8
0°-40°	2663.3	55.0
0°-60°	4177.3	86.2
0°-90°	4844.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4844.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2468	2468	2468	2468	2468	
5°	2425	2422	2422	2419	2419	230
15°	2268	2268	2245	2222	2214	638
25°	1965	1954	1923	1854	1803	902
35°	1595	1583	1506	1392	1358	997
45°	1224	1198	1095	1004	964	943
55°	850	824	747	659	625	762
65°	505	476	431	439	365	498
75°	202	188	177	168	185	217
85°	28	31	34	37	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2467.5	2467.5	2467.5	2467.5	2467.5
2.5°	2450.4	2450.4	2450.4	2447.5	2447.5
5°	2424.7	2421.8	2421.8	2419.0	2419.0
7.5°	2404.7	2401.9	2399.0	2396.2	2390.4
10°	2376.2	2376.2	2373.3	2359.1	2356.2
12.5°	2330.5	2327.7	2316.3	2296.3	2290.6
15°	2267.8	2267.8	2245.0	2222.1	2213.6
17.5°	2199.3	2196.5	2167.9	2145.1	2133.7
20°	2125.2	2119.5	2090.9	2053.8	2033.9
22.5°	2042.4	2042.4	2008.2	1959.7	1939.7
25°	1965.4	1954.0	1922.6	1854.2	1802.8
27.5°	1877.0	1859.9	1825.6	1728.7	1668.8
30°	1780.0	1771.4	1722.9	1597.4	1551.8
32.5°	1688.7	1674.5	1623.1	1491.9	1454.8
35°	1594.6	1583.2	1506.2	1392.1	1357.8
37.5°	1500.4	1486.2	1389.2	1297.9	1255.1
40°	1406.3	1389.2	1283.7	1200.9	1155.3
42.5°	1317.9	1295.1	1192.4	1103.9	1052.6
45°	1223.8	1198.1	1095.4	1004.1	964.2
47.5°	1129.6	1106.8	1012.7	918.5	872.9
50°	1029.8	1009.8	924.2	830.1	781.6
52.5°	947.1	915.7	832.9	738.8	698.9
55°	850.1	824.4	747.4	658.9	624.7
57.5°	761.6	736.0	664.6	581.9	553.4
60°	678.9	641.8	581.9	510.6	487.8
62.5°	587.6	559.1	507.8	447.9	476.4
65°	504.9	476.4	430.7	439.3	365.1
67.5°	413.6	399.4	359.4	319.5	308.1
70°	336.6	319.5	305.2	262.4	251.0
72.5°	268.1	251.0	231.1	208.2	199.7
75°	202.5	188.3	176.9	168.3	185.4
77.5°	139.8	134.1	125.5	117.0	114.1
80°	91.3	88.4	85.6	82.7	79.9
82.5°	54.2	54.2	54.2	54.2	54.2
85°	28.5	31.4	34.2	37.1	39.9
87.5°	17.1	17.1	20.0	22.8	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)