

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: P562025

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562025
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-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4050.0 lumens
Efficiency: N/A
Efficacy: 93.7 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

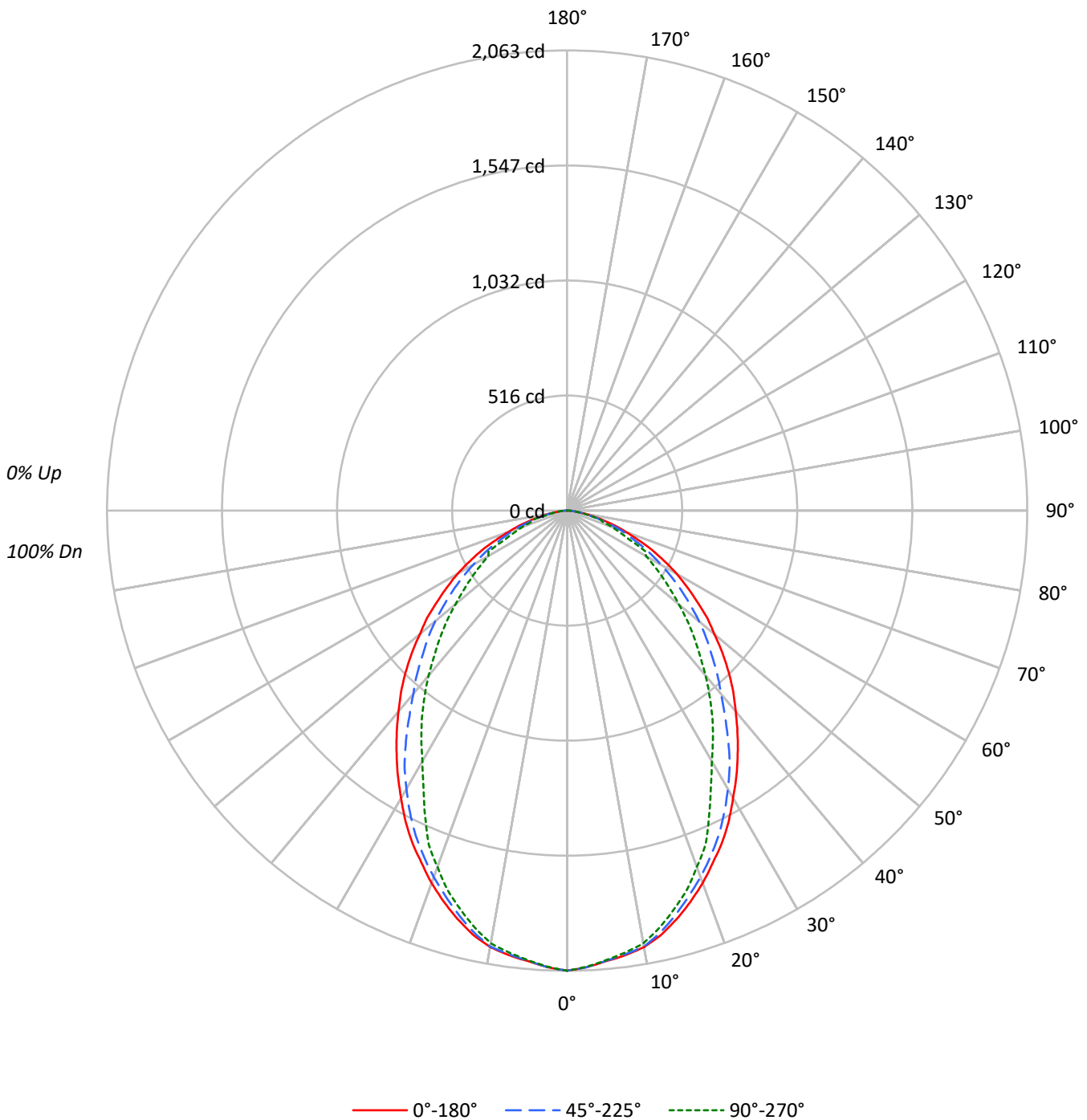
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2776	2776	2776
5°	2738	2735	2732
10°	2714	2711	2692
15°	2641	2615	2578
20°	2544	2503	2435
25°	2440	2386	2238
30°	2312	2238	2016
35°	2190	2068	1865
40°	2065	1885	1697
45°	1947	1743	1534
50°	1802	1617	1368
55°	1667	1466	1225
60°	1527	1309	1097
65°	1344	1146	972
70°	1107	1004	826
75°	880	769	806
80°	591	554	518
85°	367	442	516

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1947 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.0	4.7
10°-20°	527.0	13.0
20°-30°	729.6	18.0
30°-40°	778.0	19.2
40°-50°	709.8	17.5
50°-60°	556.0	13.7
60°-70°	362.4	8.9
70°-80°	160.6	4.0
80°-90°	34.5	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°	1448.7	35.8
0°-40°	2226.7	55.0
0°-60°	3492.6	86.2
0°-90°	4050.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4050.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2063	2063	2063	2063	2063	
5°	2027	2025	2025	2022	2022	192
15°	1896	1896	1877	1858	1851	533
25°	1643	1634	1608	1550	1507	754
35°	1333	1324	1259	1164	1135	833
45°	1023	1002	916	840	806	788
55°	711	689	625	551	522	637
65°	422	398	360	367	305	416
75°	169	157	148	141	155	181
85°	24	26	29	31	33	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2063.0	2063.0	2063.0	2063.0	2063.0
2.5°	2048.7	2048.7	2048.7	2046.3	2046.3
5°	2027.2	2024.9	2024.9	2022.5	2022.5
7.5°	2010.5	2008.2	2005.8	2003.4	1998.6
10°	1986.7	1986.7	1984.3	1972.4	1970.0
12.5°	1948.5	1946.2	1936.6	1919.9	1915.1
15°	1896.1	1896.1	1877.0	1857.9	1850.8
17.5°	1838.8	1836.4	1812.6	1793.5	1784.0
20°	1776.8	1772.0	1748.2	1717.2	1700.5
22.5°	1707.7	1707.7	1679.0	1638.5	1621.8
25°	1643.3	1633.7	1607.5	1550.2	1507.3
27.5°	1569.3	1555.0	1526.4	1445.3	1395.2
30°	1488.2	1481.1	1440.5	1335.6	1297.4
32.5°	1411.9	1400.0	1357.1	1247.3	1216.3
35°	1333.2	1323.7	1259.3	1163.9	1135.3
37.5°	1254.5	1242.6	1161.5	1085.2	1049.4
40°	1175.8	1161.5	1073.2	1004.1	965.9
42.5°	1101.9	1082.8	996.9	923.0	880.1
45°	1023.2	1001.7	915.8	839.5	806.1
47.5°	944.5	925.4	846.7	768.0	729.8
50°	861.0	844.3	772.7	694.0	653.5
52.5°	791.8	765.6	696.4	617.7	584.3
55°	710.7	689.3	624.9	550.9	522.3
57.5°	636.8	615.3	555.7	486.5	462.7
60°	567.6	536.6	486.5	426.9	407.8
62.5°	491.3	467.5	424.5	374.4	398.3
65°	422.1	398.3	360.1	367.3	305.3
67.5°	345.8	333.9	300.5	267.1	257.6
70°	281.4	267.1	255.2	219.4	209.9
72.5°	224.2	209.9	193.2	174.1	166.9
75°	169.3	157.4	147.9	140.7	155.0
77.5°	116.9	112.1	104.9	97.8	95.4
80°	76.3	73.9	71.5	69.2	66.8
82.5°	45.3	45.3	45.3	45.3	45.3
85°	23.8	26.2	28.6	31.0	33.4
87.5°	14.3	14.3	16.7	19.1	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)