

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: P562017

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562017
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-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4796.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

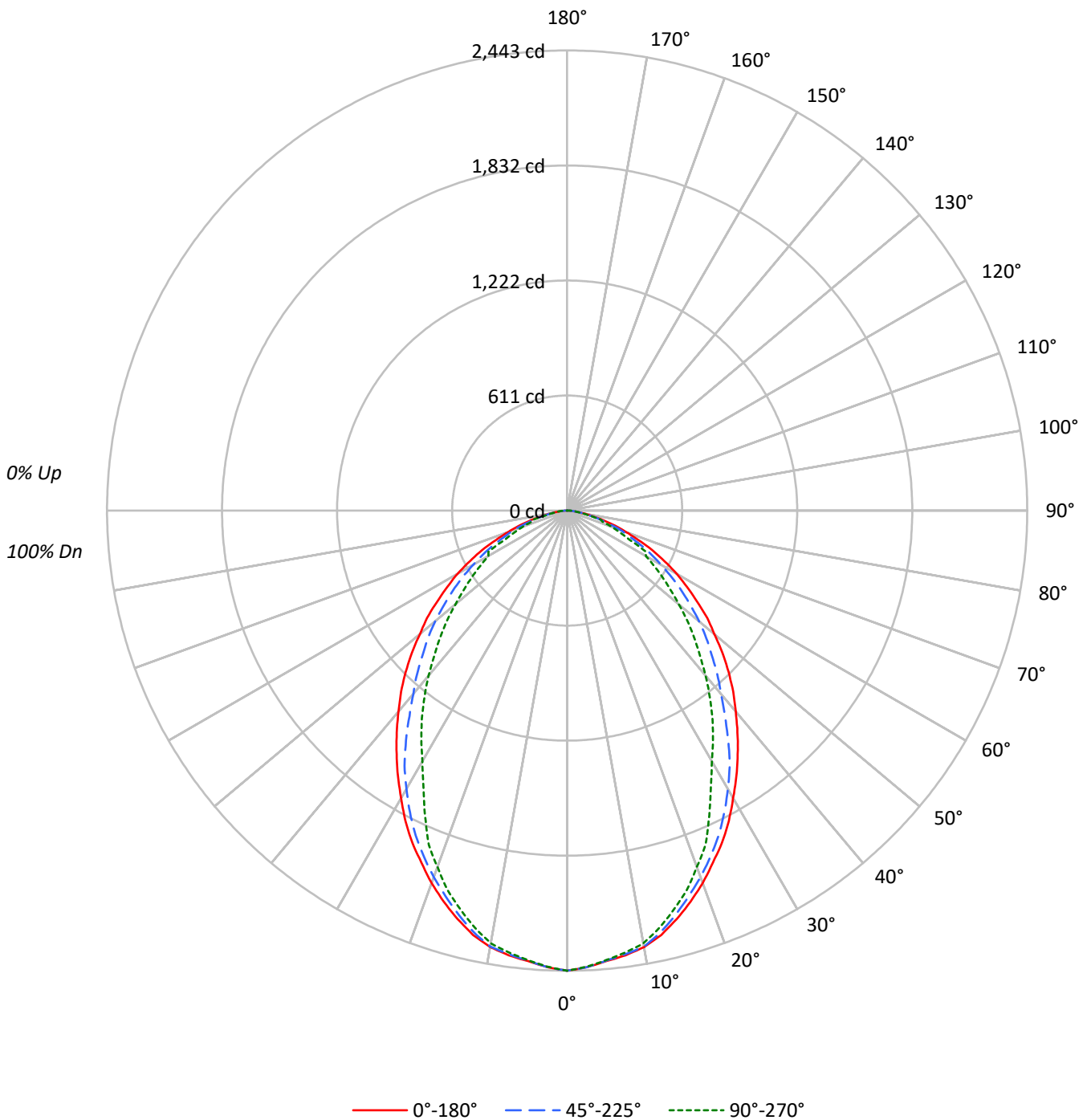
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3287	3287	3287
5°	3242	3239	3235
10°	3214	3210	3187
15°	3128	3096	3053
20°	3013	2964	2883
25°	2889	2826	2650
30°	2738	2650	2387
35°	2593	2449	2208
40°	2446	2232	2009
45°	2305	2064	1816
50°	2134	1915	1620
55°	1974	1736	1451
60°	1809	1551	1300
65°	1592	1358	1151
70°	1311	1189	978
75°	1042	910	954
80°	700	656	613
85°	435	523	610

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2305 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.4	4.7
10°-20°	624.1	13.0
20°-30°	864.0	18.0
30°-40°	921.3	19.2
40°-50°	840.5	17.5
50°-60°	658.5	13.7
60°-70°	429.2	8.9
70°-80°	190.1	4.0
80°-90°	40.8	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°	1715.6	35.8
0°-40°	2636.9	55.0
0°-60°	4135.9	86.2
0°-90°	4796.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4796.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2443	2443	2443	2443	2443	
5°	2401	2398	2398	2395	2395	228
15°	2245	2245	2223	2200	2192	631
25°	1946	1935	1904	1836	1785	893
35°	1579	1568	1491	1378	1344	987
45°	1212	1186	1084	994	955	933
55°	842	816	740	652	618	755
65°	500	472	426	435	362	493
75°	200	186	175	167	184	215
85°	28	31	34	37	40	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2443.0	2443.0	2443.0	2443.0	2443.0
2.5°	2426.1	2426.1	2426.1	2423.2	2423.2
5°	2400.7	2397.8	2397.8	2395.0	2395.0
7.5°	2380.9	2378.1	2375.2	2372.4	2366.8
10°	2352.6	2352.6	2349.8	2335.7	2332.9
12.5°	2307.5	2304.6	2293.3	2273.6	2267.9
15°	2245.3	2245.3	2222.7	2200.1	2191.7
17.5°	2177.5	2174.7	2146.5	2123.9	2112.6
20°	2104.1	2098.5	2070.2	2033.5	2013.7
22.5°	2022.2	2022.2	1988.3	1940.3	1920.5
25°	1945.9	1934.6	1903.6	1835.8	1785.0
27.5°	1858.4	1841.4	1807.6	1711.5	1652.2
30°	1762.4	1753.9	1705.9	1581.6	1536.4
32.5°	1672.0	1657.9	1607.0	1477.1	1440.4
35°	1578.8	1567.5	1491.2	1378.3	1344.4
37.5°	1485.6	1471.5	1375.4	1285.1	1242.7
40°	1392.4	1375.4	1270.9	1189.0	1143.8
42.5°	1304.8	1282.2	1180.6	1093.0	1042.2
45°	1211.6	1186.2	1084.5	994.2	954.6
47.5°	1118.4	1095.8	1002.6	909.4	864.2
50°	1019.6	999.8	915.1	821.9	773.9
52.5°	937.7	906.6	824.7	731.5	692.0
55°	841.6	816.2	740.0	652.4	618.5
57.5°	754.1	728.7	658.1	576.2	547.9
60°	672.2	635.5	576.2	505.5	483.0
62.5°	581.8	553.6	502.7	443.4	471.7
65°	499.9	471.7	426.5	434.9	361.5
67.5°	409.5	395.4	355.9	316.3	305.0
70°	333.3	316.3	302.2	259.8	248.5
72.5°	265.5	248.5	228.8	206.2	197.7
75°	200.5	186.4	175.1	166.6	183.6
77.5°	138.4	132.7	124.3	115.8	113.0
80°	90.4	87.6	84.7	81.9	79.1
82.5°	53.7	53.7	53.7	53.7	53.7
85°	28.2	31.1	33.9	36.7	39.5
87.5°	16.9	16.9	19.8	22.6	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)