

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: P562714

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562714
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-LD4-2LO-35-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4546.0 lumens
Efficiency: N/A
Efficacy: 97.1 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

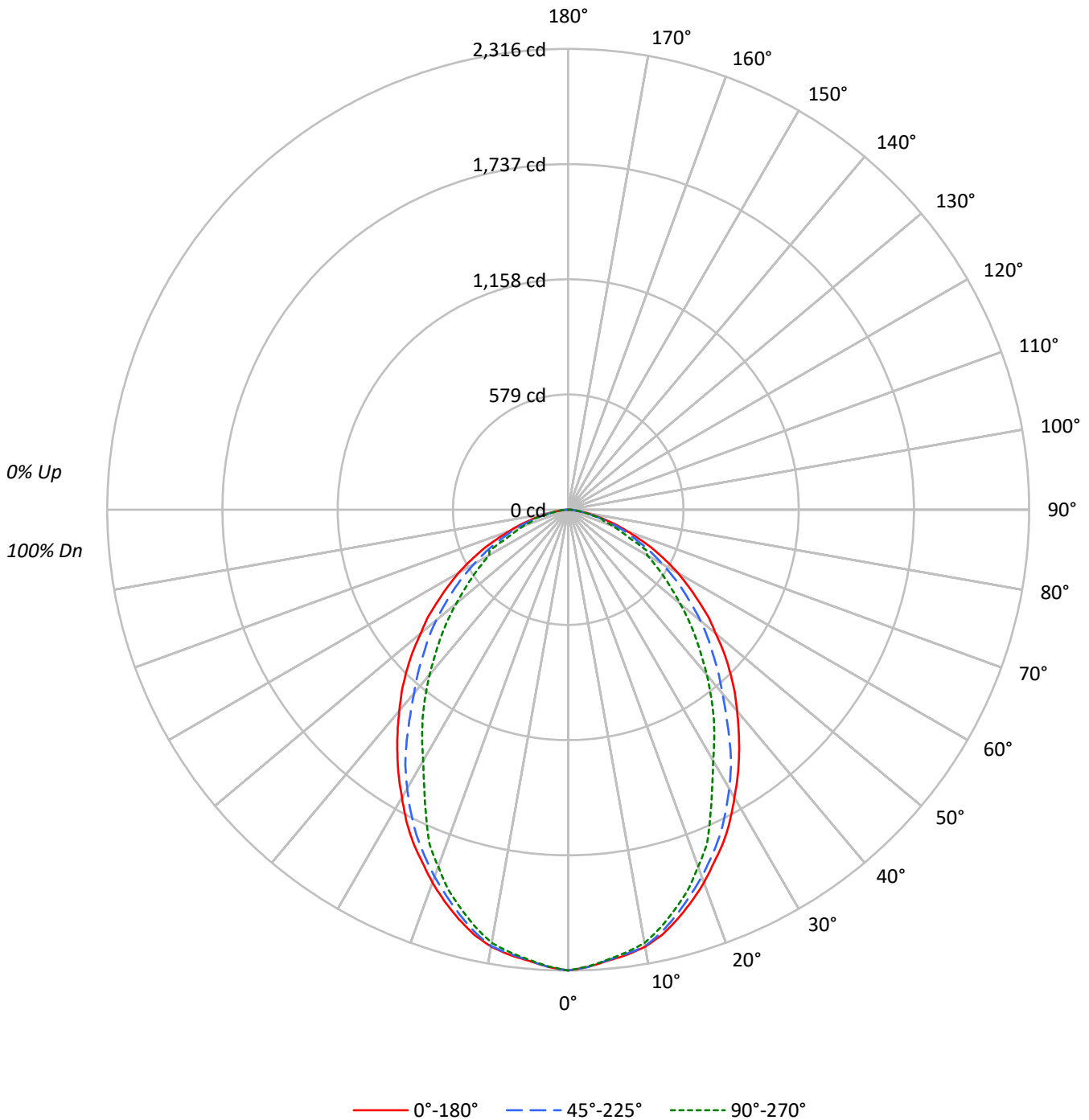
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3116	3116	3116
5°	3073	3070	3066
10°	3047	3043	3021
15°	2965	2935	2894
20°	2856	2810	2733
25°	2738	2679	2512
30°	2595	2512	2263
35°	2458	2322	2093
40°	2318	2116	1904
45°	2185	1956	1722
50°	2023	1816	1535
55°	1871	1645	1375
60°	1714	1470	1232
65°	1508	1287	1091
70°	1243	1127	927
75°	988	863	905
80°	664	622	581
85°	414	496	579

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2185 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.6	4.7
10°-20°	591.6	13.0
20°-30°	819.0	18.0
30°-40°	873.3	19.2
40°-50°	796.7	17.5
50°-60°	624.2	13.7
60°-70°	406.8	8.9
70°-80°	180.2	4.0
80°-90°	38.7	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°	1626.1	35.8
0°-40°	2499.4	55.0
0°-60°	3920.3	86.2
0°-90°	4546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4546.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2316	2316	2316	2316	2316	
5°	2276	2273	2273	2270	2270	216
15°	2128	2128	2107	2085	2077	598
25°	1844	1834	1804	1740	1692	847
35°	1496	1486	1414	1306	1274	936
45°	1148	1124	1028	942	905	885
55°	798	774	701	618	586	716
65°	474	447	404	412	343	467
75°	190	177	166	158	174	204
85°	27	29	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°	2315.7	2315.7	2315.7	2315.7	2315.7
2.5°	2299.6	2299.6	2299.6	2296.9	2296.9
5°	2275.5	2272.8	2272.8	2270.2	2270.2
7.5°	2256.8	2254.1	2251.4	2248.7	2243.4
10°	2230.0	2230.0	2227.3	2213.9	2211.3
12.5°	2187.2	2184.5	2173.8	2155.0	2149.7
15°	2128.3	2128.3	2106.9	2085.4	2077.4
17.5°	2064.0	2061.3	2034.6	2013.2	2002.5
20°	1994.4	1989.1	1962.3	1927.5	1908.8
22.5°	1916.8	1916.8	1884.7	1839.2	1820.4
25°	1844.5	1833.8	1804.3	1740.1	1691.9
27.5°	1761.5	1745.5	1713.3	1622.3	1566.1
30°	1670.5	1662.5	1617.0	1499.2	1456.3
32.5°	1584.8	1571.4	1523.3	1400.1	1365.3
35°	1496.5	1485.8	1413.5	1306.4	1274.3
37.5°	1408.1	1394.8	1303.7	1218.1	1177.9
40°	1319.8	1303.7	1204.7	1127.0	1084.2
42.5°	1236.8	1215.4	1119.0	1036.0	987.8
45°	1148.5	1124.4	1028.0	942.3	904.9
47.5°	1060.1	1038.7	950.4	862.0	819.2
50°	966.4	947.7	867.4	779.0	733.5
52.5°	888.8	859.3	781.7	693.4	655.9
55°	797.8	773.7	701.4	618.4	586.3
57.5°	714.8	690.7	623.8	546.1	519.4
60°	637.1	602.3	546.1	479.2	457.8
62.5°	551.5	524.7	476.5	420.3	447.1
65°	473.8	447.1	404.2	412.3	342.7
67.5°	388.2	374.8	337.3	299.8	289.1
70°	315.9	299.8	286.4	246.3	235.6
72.5°	251.6	235.6	216.8	195.4	187.4
75°	190.1	176.7	166.0	157.9	174.0
77.5°	131.2	125.8	117.8	109.8	107.1
80°	85.7	83.0	80.3	77.6	75.0
82.5°	50.9	50.9	50.9	50.9	50.9
85°	26.8	29.4	32.1	34.8	37.5
87.5°	16.1	16.1	18.7	21.4	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)