

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: P562824

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562824
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-50-UNV-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4178.0 lumens
Efficiency: N/A
Efficacy: 89.3 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

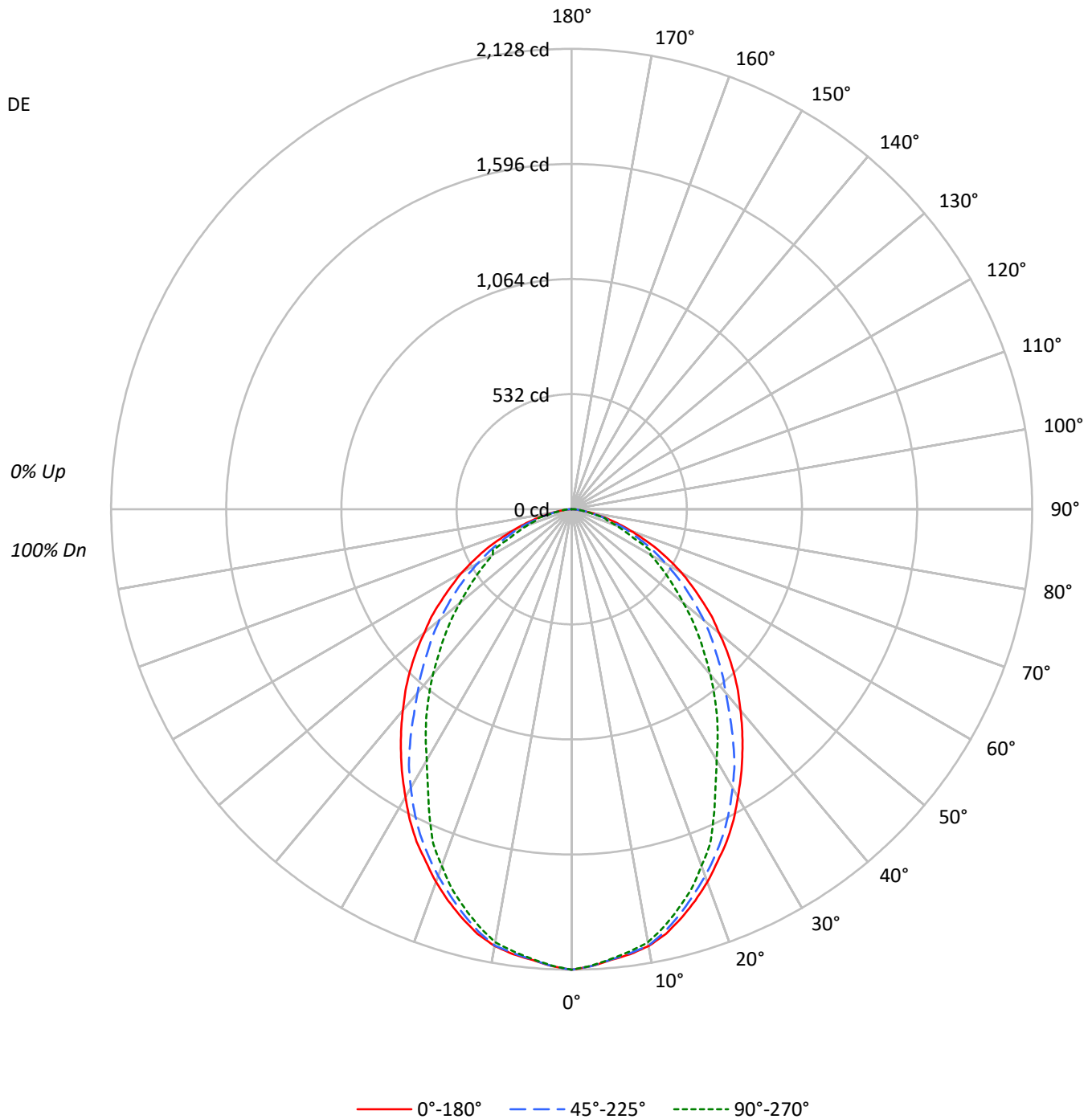
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2863	2863	2863
5°	2825	2821	2818
10°	2800	2797	2777
15°	2725	2697	2659
20°	2625	2582	2512
25°	2517	2462	2309
30°	2385	2309	2079
35°	2259	2134	1924
40°	2131	1945	1750
45°	2008	1798	1582
50°	1859	1669	1411
55°	1720	1512	1264
60°	1576	1351	1132
65°	1387	1183	1003
70°	1142	1036	852
75°	908	793	831
80°	610	572	534
85°	380	455	531

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2008 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.1	4.7
10°-20°	543.7	13.0
20°-30°	752.7	18.0
30°-40°	802.6	19.2
40°-50°	732.2	17.5
50°-60°	573.6	13.7
60°-70°	373.9	8.9
70°-80°	165.6	4.0
80°-90°	35.6	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°	1494.5	35.8
0°-40°	2297.1	55.0
0°-60°	3602.9	86.2
0°-90°	4178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2128	2128	2128	2128	2128	
5°	2091	2089	2089	2086	2086	199
15°	1956	1956	1936	1917	1909	550
25°	1695	1685	1658	1599	1555	778
35°	1375	1366	1299	1201	1171	860
45°	1056	1033	945	866	832	813
55°	733	711	645	568	539	658
65°	436	411	372	379	315	429
75°	175	162	152	145	160	187
85°	25	27	30	32	34	34
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2128.2	2128.2	2128.2	2128.2	2128.2
2.5°	2113.5	2113.5	2113.5	2111.0	2111.0
5°	2091.3	2088.9	2088.9	2086.4	2086.4
7.5°	2074.1	2071.6	2069.2	2066.7	2061.8
10°	2049.5	2049.5	2047.0	2034.7	2032.3
12.5°	2010.1	2007.7	1997.8	1980.6	1975.7
15°	1956.0	1956.0	1936.3	1916.6	1909.2
17.5°	1896.9	1894.5	1869.9	1850.2	1840.4
20°	1833.0	1828.1	1803.4	1771.5	1754.2
22.5°	1761.6	1761.6	1732.1	1690.3	1673.0
25°	1695.2	1685.4	1658.3	1599.2	1555.0
27.5°	1618.9	1604.2	1574.6	1491.0	1439.3
30°	1535.3	1527.9	1486.1	1377.8	1338.4
32.5°	1456.5	1444.2	1399.9	1286.8	1254.8
35°	1375.3	1365.5	1299.1	1200.7	1171.1
37.5°	1294.2	1281.9	1198.2	1119.5	1082.6
40°	1213.0	1198.2	1107.2	1035.8	996.4
42.5°	1136.7	1117.0	1028.4	952.2	907.9
45°	1055.5	1033.4	944.8	866.0	831.6
47.5°	974.3	954.6	873.4	792.2	752.9
50°	888.2	871.0	797.2	716.0	674.1
52.5°	816.8	789.8	718.4	637.2	602.8
55°	733.2	711.0	644.6	568.3	538.8
57.5°	656.9	634.8	573.3	501.9	477.3
60°	585.6	553.6	501.9	440.4	420.7
62.5°	506.8	482.2	437.9	386.3	410.9
65°	435.5	410.9	371.5	378.9	314.9
67.5°	356.8	344.5	310.0	275.6	265.7
70°	290.3	275.6	263.3	226.4	216.5
72.5°	231.3	216.5	199.3	179.6	172.2
75°	174.7	162.4	152.5	145.2	159.9
77.5°	120.6	115.6	108.3	100.9	98.4
80°	78.7	76.3	73.8	71.4	68.9
82.5°	46.7	46.7	46.7	46.7	46.7
85°	24.6	27.1	29.5	32.0	34.4
87.5°	14.8	14.8	17.2	19.7	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)