

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: P562457

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562457
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-LD4-1STD-50-UNV-82-88-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3148.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

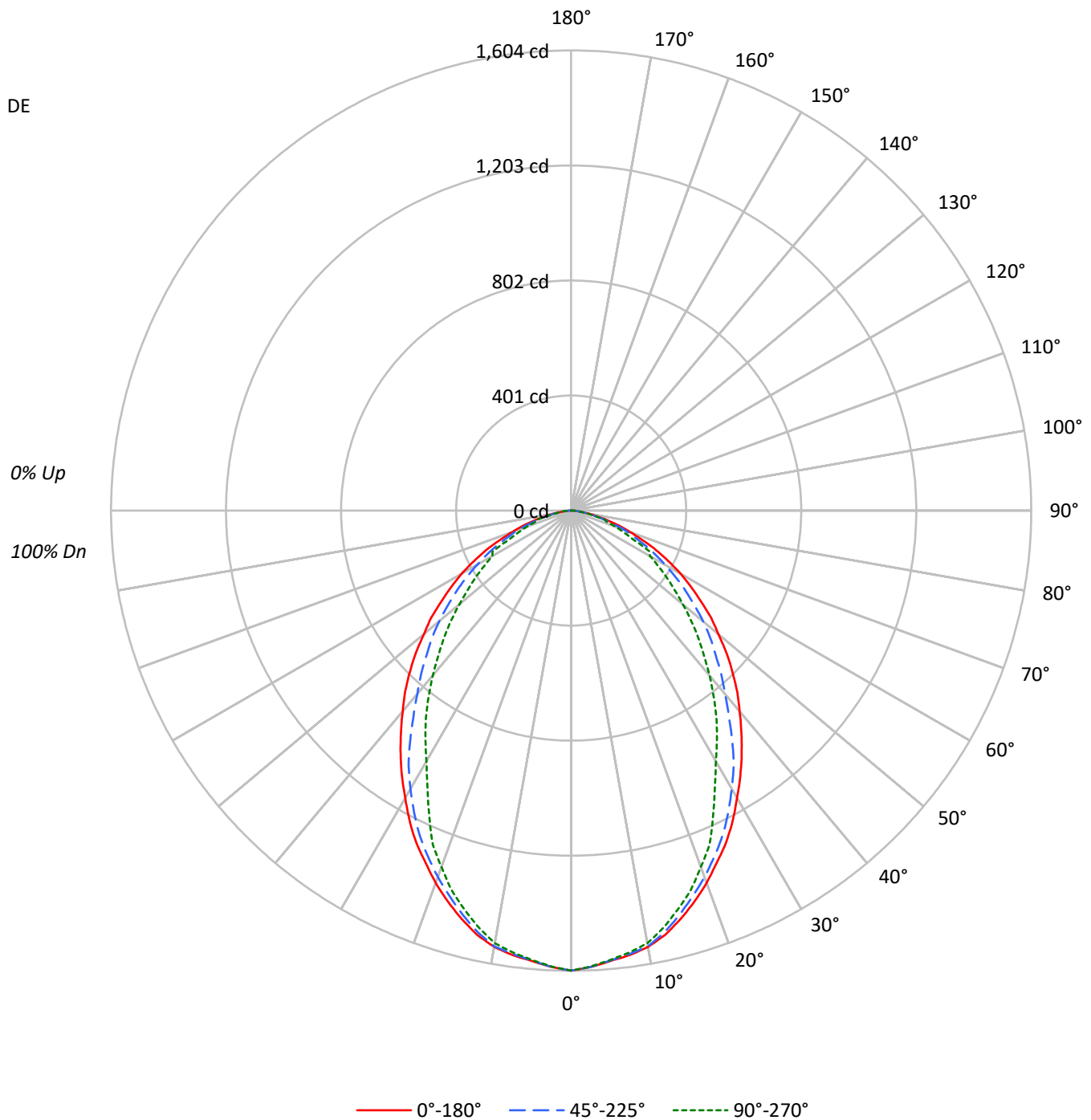
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2157	2157	2157
5°	2128	2126	2123
10°	2110	2107	2092
15°	2053	2032	2004
20°	1978	1946	1893
25°	1896	1855	1739
30°	1797	1740	1567
35°	1702	1608	1449
40°	1605	1465	1319
45°	1513	1355	1192
50°	1401	1257	1063
55°	1296	1139	952
60°	1187	1018	853
65°	1045	891	755
70°	861	780	642
75°	684	597	626
80°	459	431	402
85°	286	343	401

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1513 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.3	4.7
10°-20°	409.7	13.0
20°-30°	567.1	18.0
30°-40°	604.7	19.2
40°-50°	551.7	17.5
50°-60°	432.2	13.7
60°-70°	281.7	8.9
70°-80°	124.8	4.0
80°-90°	26.8	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°	1126.1	35.8
0°-40°	1730.8	55.0
0°-60°	2714.7	86.2
0°-90°	3148.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3148.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1604	1604	1604	1604	1604	
5°	1576	1574	1574	1572	1572	150
15°	1474	1474	1459	1444	1439	414
25°	1277	1270	1250	1205	1172	586
35°	1036	1029	979	905	882	648
45°	795	779	712	652	627	613
55°	552	536	486	428	406	495
65°	328	310	280	286	237	323
75°	132	122	115	109	120	141
85°	18	20	22	24	26	26
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1603.5	1603.5	1603.5	1603.5	1603.5
2.5°	1592.4	1592.4	1592.4	1590.6	1590.6
5°	1575.7	1573.9	1573.9	1572.0	1572.0
7.5°	1562.8	1560.9	1559.1	1557.2	1553.5
10°	1544.2	1544.2	1542.4	1533.1	1531.3
12.5°	1514.6	1512.7	1505.3	1492.3	1488.6
15°	1473.8	1473.8	1459.0	1444.1	1438.6
17.5°	1429.3	1427.4	1408.9	1394.1	1386.7
20°	1381.1	1377.4	1358.8	1334.7	1321.8
22.5°	1327.3	1327.3	1305.1	1273.6	1260.6
25°	1277.3	1269.9	1249.5	1205.0	1171.6
27.5°	1219.8	1208.7	1186.4	1123.4	1084.5
30°	1156.8	1151.2	1119.7	1038.1	1008.5
32.5°	1097.5	1088.2	1054.8	969.5	945.4
35°	1036.3	1028.9	978.8	904.7	882.4
37.5°	975.1	965.8	902.8	843.5	815.7
40°	913.9	902.8	834.2	780.5	750.8
42.5°	856.5	841.6	774.9	717.4	684.1
45°	795.3	778.6	711.9	652.5	626.6
47.5°	734.1	719.3	658.1	596.9	567.3
50°	669.2	656.3	600.6	539.5	507.9
52.5°	615.5	595.1	541.3	480.1	454.2
55°	552.4	535.8	485.7	428.2	406.0
57.5°	495.0	478.3	431.9	378.2	359.6
60°	441.2	417.1	378.2	331.8	317.0
62.5°	381.9	363.3	330.0	291.0	309.6
65°	328.1	309.6	279.9	285.5	237.3
67.5°	268.8	259.5	233.6	207.6	200.2
70°	218.8	207.6	198.4	170.6	163.1
72.5°	174.3	163.1	150.2	135.3	129.8
75°	131.6	122.4	114.9	109.4	120.5
77.5°	90.8	87.1	81.6	76.0	74.2
80°	59.3	57.5	55.6	53.8	51.9
82.5°	35.2	35.2	35.2	35.2	35.2
85°	18.5	20.4	22.2	24.1	26.0
87.5°	11.1	11.1	13.0	14.8	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)