

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: P562000

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562000
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-82-84-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

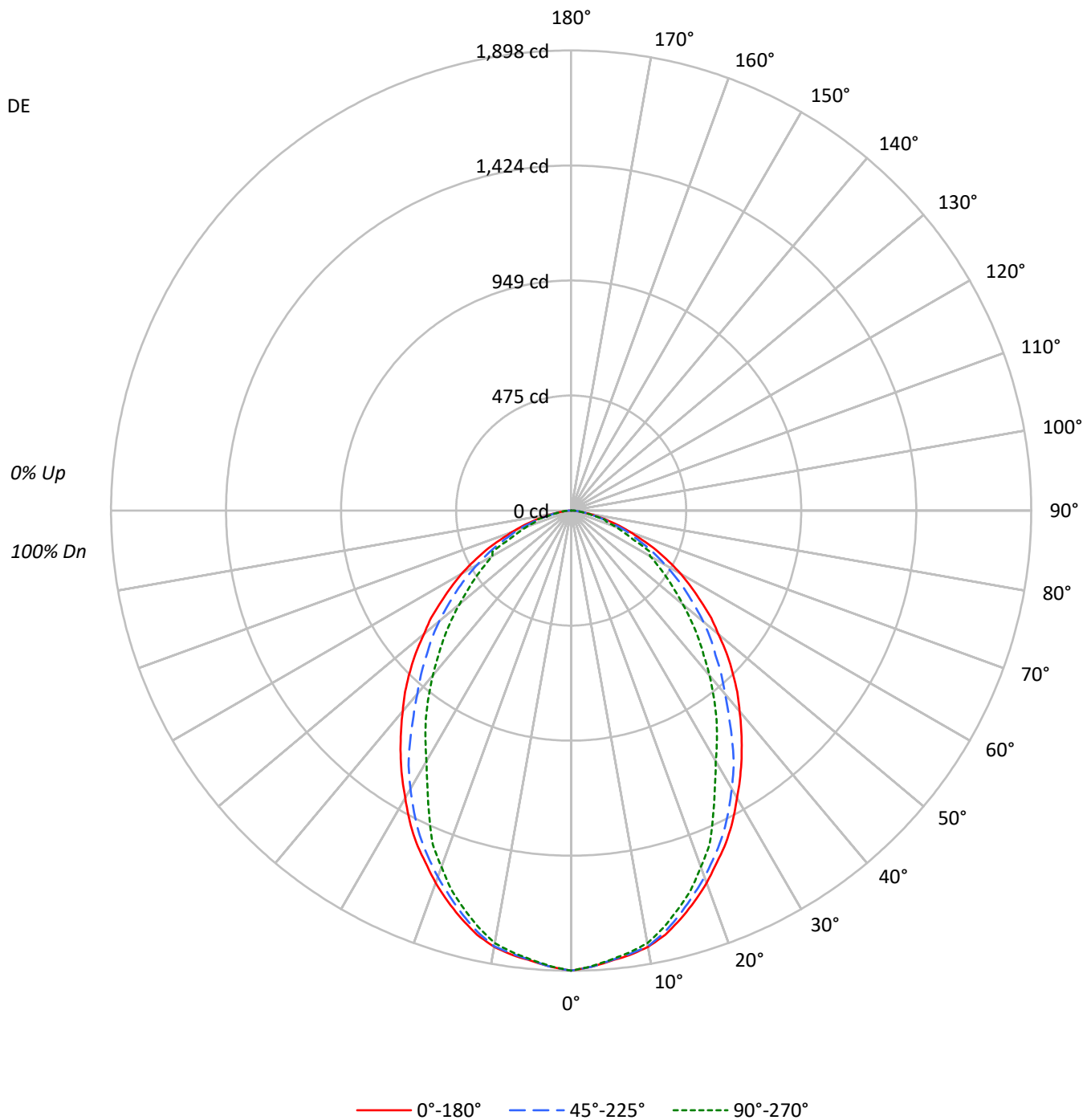
Lumens per Lamp: N/A
Luminaire Lumens: 3725.0 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2553	2553	2553
5°	2518	2515	2512
10°	2497	2494	2476
15°	2429	2405	2371
20°	2340	2302	2239
25°	2244	2195	2058
30°	2127	2058	1854
35°	2014	1902	1715
40°	1899	1734	1560
45°	1791	1603	1411
50°	1658	1488	1258
55°	1533	1348	1127
60°	1405	1204	1009
65°	1236	1054	894
70°	1018	923	759
75°	809	707	741
80°	544	510	476
85°	338	406	474

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1791 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.6	4.7
10°-20°	484.7	13.0
20°-30°	671.1	18.0
30°-40°	715.6	19.2
40°-50°	652.8	17.5
50°-60°	511.4	13.7
60°-70°	333.3	8.9
70°-80°	147.7	4.0
80°-90°	31.7	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°	1332.5	35.8
0°-40°	2048.0	55.0
0°-60°	3212.3	86.2
0°-90°	3725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3725.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1898	1898	1898	1898	1898	
5°	1865	1862	1862	1860	1860	177
15°	1744	1744	1726	1709	1702	490
25°	1511	1503	1478	1426	1386	694
35°	1226	1217	1158	1070	1044	767
45°	941	921	842	772	741	725
55°	654	634	575	507	480	586
65°	388	366	331	338	281	383
75°	156	145	136	129	143	167
85°	22	24	26	28	31	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1897.5	1897.5	1897.5	1897.5	1897.5
2.5°	1884.3	1884.3	1884.3	1882.1	1882.1
5°	1864.6	1862.4	1862.4	1860.2	1860.2
7.5°	1849.2	1847.0	1844.8	1842.6	1838.2
10°	1827.3	1827.3	1825.1	1814.1	1811.9
12.5°	1792.2	1790.0	1781.2	1765.8	1761.5
15°	1743.9	1743.9	1726.4	1708.8	1702.2
17.5°	1691.3	1689.1	1667.1	1649.6	1640.8
20°	1634.2	1629.8	1607.9	1579.4	1564.0
22.5°	1570.6	1570.6	1544.3	1507.0	1491.6
25°	1511.4	1502.6	1478.5	1425.8	1386.4
27.5°	1443.4	1430.2	1403.9	1329.3	1283.3
30°	1368.8	1362.2	1324.9	1228.4	1193.3
32.5°	1298.6	1287.6	1248.2	1147.3	1118.7
35°	1226.2	1217.4	1158.2	1070.5	1044.2
37.5°	1153.8	1142.9	1068.3	998.1	965.2
40°	1081.4	1068.3	987.1	923.5	888.4
42.5°	1013.4	995.9	916.9	848.9	809.4
45°	941.1	921.3	842.3	772.1	741.4
47.5°	868.7	851.1	778.7	706.3	671.2
50°	791.9	776.5	710.7	638.3	601.0
52.5°	728.3	704.1	640.5	568.1	537.4
55°	653.7	634.0	574.7	506.7	480.4
57.5°	585.7	565.9	511.1	447.5	425.6
60°	522.1	493.6	447.5	392.7	375.1
62.5°	451.9	429.9	390.5	344.4	366.3
65°	388.3	366.3	331.2	337.8	280.8
67.5°	318.1	307.1	276.4	245.7	236.9
70°	258.8	245.7	234.7	201.8	193.0
72.5°	206.2	193.0	177.7	160.1	153.6
75°	155.7	144.8	136.0	129.4	142.6
77.5°	107.5	103.1	96.5	89.9	87.7
80°	70.2	68.0	65.8	63.6	61.4
82.5°	41.7	41.7	41.7	41.7	41.7
85°	21.9	24.1	26.3	28.5	30.7
87.5°	13.2	13.2	15.4	17.5	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)