

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: P562141

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562141
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-50-UNV-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4532.0 lumens
Efficiency: N/A
Efficacy: 104.9 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

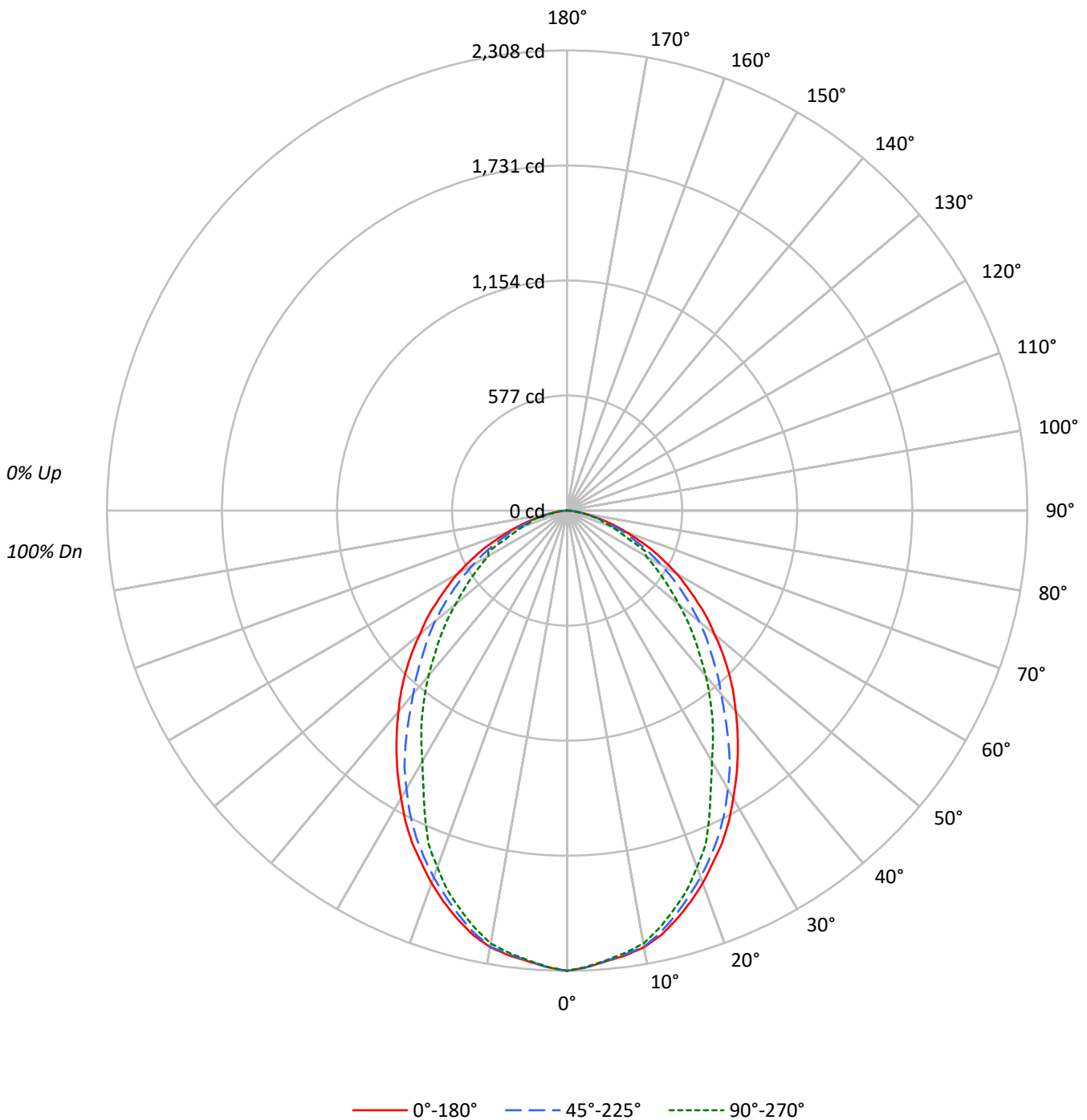
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3106	3106	3106
5°	3064	3060	3057
10°	3037	3034	3012
15°	2955	2926	2885
20°	2847	2801	2725
25°	2730	2670	2504
30°	2587	2504	2256
35°	2451	2315	2087
40°	2311	2109	1899
45°	2179	1950	1717
50°	2017	1810	1531
55°	1866	1640	1371
60°	1709	1465	1228
65°	1504	1283	1088
70°	1239	1124	924
75°	985	860	902
80°	662	621	579
85°	412	494	577

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2179 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.9	4.7
10°-20°	589.8	13.0
20°-30°	816.5	18.0
30°-40°	870.6	19.2
40°-50°	794.2	17.5
50°-60°	622.2	13.7
60°-70°	405.5	8.9
70°-80°	179.7	4.0
80°-90°	38.6	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°	1621.1	35.8
0°-40°	2491.7	55.0
0°-60°	3908.2	86.2
0°-90°	4532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2308	2308	2308	2308	2308	
5°	2268	2266	2266	2263	2263	215
15°	2122	2122	2100	2079	2071	596
25°	1839	1828	1799	1735	1687	844
35°	1492	1481	1409	1302	1270	933
45°	1145	1121	1025	939	902	882
55°	795	771	699	616	584	713
65°	472	446	403	411	342	466
75°	190	176	166	158	174	203
85°	27	29	32	35	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2308.5	2308.5	2308.5	2308.5	2308.5
2.5°	2292.5	2292.5	2292.5	2289.9	2289.9
5°	2268.5	2265.8	2265.8	2263.2	2263.2
7.5°	2249.8	2247.2	2244.5	2241.8	2236.5
10°	2223.1	2223.1	2220.5	2207.1	2204.5
12.5°	2180.4	2177.8	2167.1	2148.4	2143.1
15°	2121.7	2121.7	2100.4	2079.0	2071.0
17.5°	2057.7	2055.0	2028.3	2007.0	1996.3
20°	1988.3	1982.9	1956.3	1921.6	1902.9
22.5°	1910.9	1910.9	1878.9	1833.5	1814.8
25°	1838.8	1828.2	1798.8	1734.7	1686.7
27.5°	1756.1	1740.1	1708.1	1617.3	1561.3
30°	1665.4	1657.3	1612.0	1494.5	1451.8
32.5°	1579.9	1566.6	1518.6	1395.8	1361.1
35°	1491.9	1481.2	1409.1	1302.4	1270.4
37.5°	1403.8	1390.5	1299.7	1214.3	1174.3
40°	1315.7	1299.7	1201.0	1123.6	1080.9
42.5°	1233.0	1211.7	1115.6	1032.8	984.8
45°	1144.9	1120.9	1024.8	939.4	902.1
47.5°	1056.9	1035.5	947.4	859.4	816.7
50°	963.4	944.8	864.7	776.6	731.3
52.5°	886.1	856.7	779.3	691.2	653.9
55°	795.3	771.3	699.2	616.5	584.5
57.5°	712.6	688.6	621.8	544.4	517.8
60°	635.2	600.5	544.4	477.7	456.4
62.5°	549.8	523.1	475.1	419.0	445.7
65°	472.4	445.7	403.0	411.0	341.6
67.5°	387.0	373.6	336.3	298.9	288.2
70°	314.9	298.9	285.6	245.5	234.9
72.5°	250.9	234.9	216.2	194.8	186.8
75°	189.5	176.1	165.5	157.5	173.5
77.5°	130.8	125.4	117.4	109.4	106.8
80°	85.4	82.7	80.1	77.4	74.7
82.5°	50.7	50.7	50.7	50.7	50.7
85°	26.7	29.4	32.0	34.7	37.4
87.5°	16.0	16.0	18.7	21.4	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)