

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: P562049

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562049
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-40-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4593.0 lumens
Efficiency: N/A
Efficacy: 106.3 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

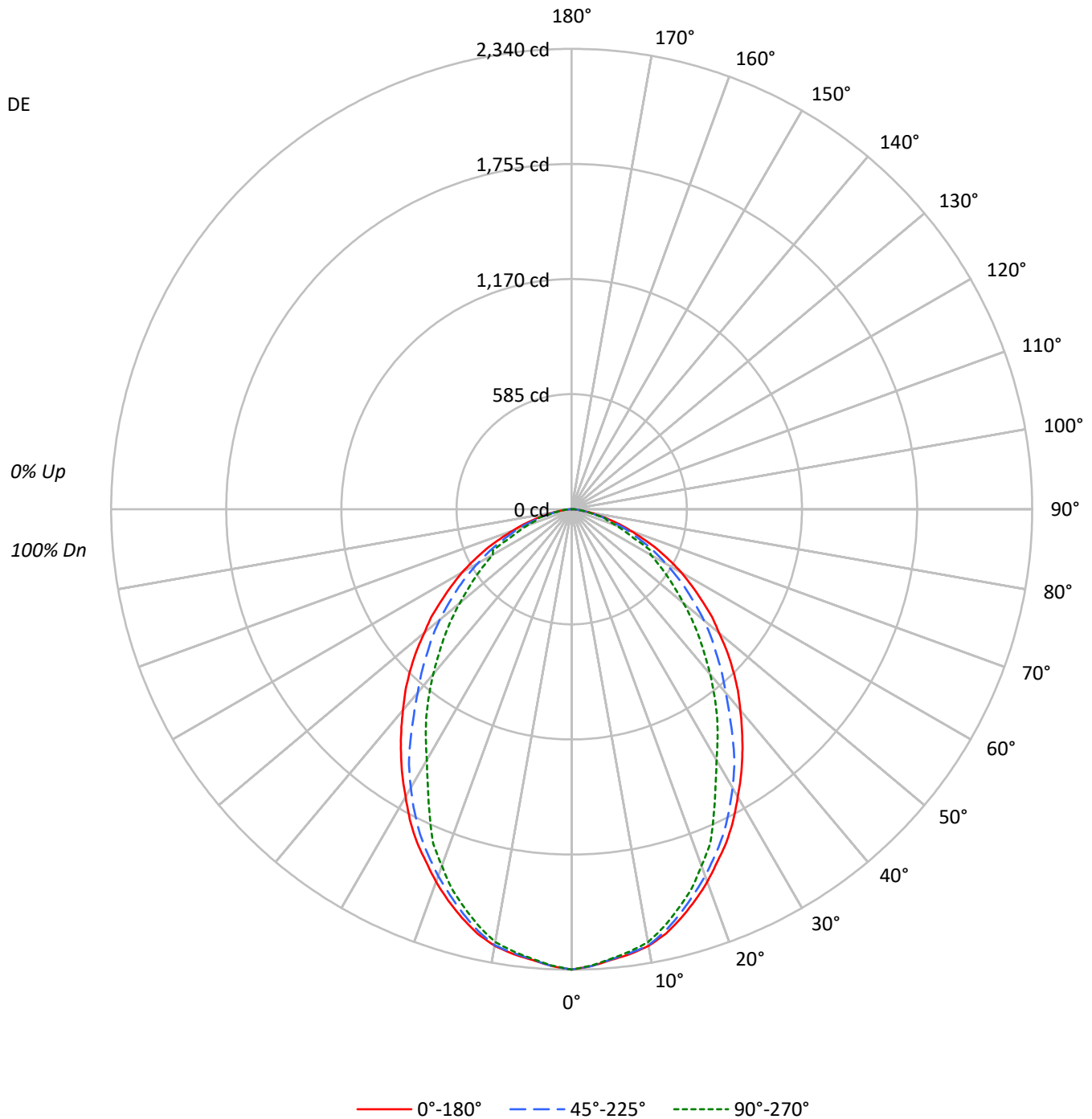
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3148	3148	3148
5°	3105	3101	3098
10°	3078	3075	3052
15°	2995	2965	2924
20°	2885	2839	2761
25°	2767	2706	2538
30°	2622	2538	2286
35°	2484	2346	2115
40°	2342	2138	1924
45°	2208	1976	1740
50°	2044	1834	1551
55°	1891	1662	1389
60°	1732	1485	1245
65°	1524	1300	1102
70°	1256	1138	936
75°	998	872	914
80°	671	628	587
85°	417	502	585

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2208 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.8	4.7
10°-20°	597.7	13.0
20°-30°	827.5	18.0
30°-40°	882.3	19.2
40°-50°	804.9	17.5
50°-60°	630.6	13.7
60°-70°	411.0	8.9
70°-80°	182.1	4.0
80°-90°	39.1	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°	1643.0	35.8
0°-40°	2525.3	55.0
0°-60°	3960.8	86.2
0°-90°	4593.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4593.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2340	2340	2340	2340	2340	
5°	2299	2296	2296	2294	2294	218
15°	2150	2150	2129	2107	2099	605
25°	1864	1853	1823	1758	1709	856
35°	1512	1501	1428	1320	1288	945
45°	1160	1136	1039	952	914	894
55°	806	782	709	625	592	723
65°	479	452	408	416	346	472
75°	192	178	168	160	176	206
85°	27	30	32	35	38	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2339.6	2339.6	2339.6	2339.6	2339.6
2.5°	2323.4	2323.4	2323.4	2320.7	2320.7
5°	2299.0	2296.3	2296.3	2293.6	2293.6
7.5°	2280.1	2277.4	2274.7	2272.0	2266.6
10°	2253.1	2253.1	2250.4	2236.8	2234.1
12.5°	2209.8	2207.1	2196.3	2177.3	2171.9
15°	2150.3	2150.3	2128.6	2107.0	2098.9
17.5°	2085.4	2082.7	2055.6	2034.0	2023.2
20°	2015.0	2009.6	1982.6	1947.4	1928.5
22.5°	1936.6	1936.6	1904.1	1858.2	1839.2
25°	1863.6	1852.8	1823.0	1758.1	1709.4
27.5°	1779.7	1763.5	1731.0	1639.1	1582.3
30°	1687.8	1679.7	1633.7	1514.7	1471.4
32.5°	1601.2	1587.7	1539.0	1414.6	1379.4
35°	1512.0	1501.1	1428.1	1319.9	1287.5
37.5°	1422.7	1409.2	1317.2	1230.7	1190.1
40°	1333.4	1317.2	1217.1	1138.7	1095.4
42.5°	1249.6	1228.0	1130.6	1046.7	998.1
45°	1160.3	1136.0	1038.6	952.1	914.2
47.5°	1071.1	1049.4	960.2	870.9	827.7
50°	976.4	957.5	876.3	787.1	741.1
52.5°	898.0	868.2	789.8	700.5	662.7
55°	806.0	781.7	708.6	624.8	592.3
57.5°	722.2	697.8	630.2	551.8	524.7
60°	643.7	608.6	551.8	484.2	462.5
62.5°	557.2	530.1	481.4	424.6	451.7
65°	478.7	451.7	408.4	416.5	346.2
67.5°	392.2	378.7	340.8	302.9	292.1
70°	319.2	302.9	289.4	248.8	238.0
72.5°	254.2	238.0	219.1	197.4	189.3
75°	192.0	178.5	167.7	159.6	175.8
77.5°	132.5	127.1	119.0	110.9	108.2
80°	86.6	83.8	81.1	78.4	75.7
82.5°	51.4	51.4	51.4	51.4	51.4
85°	27.0	29.8	32.5	35.2	37.9
87.5°	16.2	16.2	18.9	21.6	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)