

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: P562083

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562083
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-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4748.0 lumens
Efficiency: N/A
Efficacy: 109.9 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

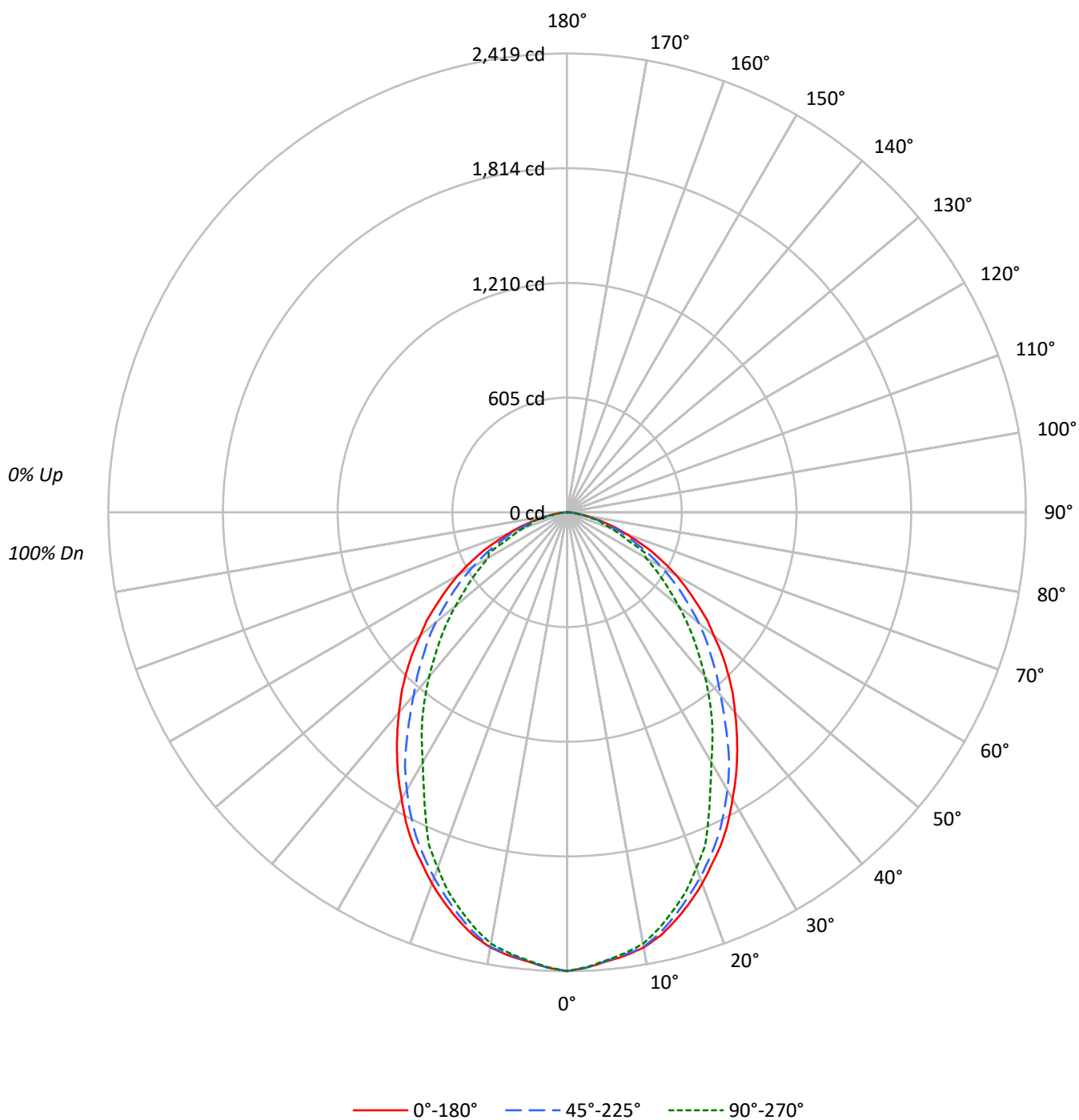
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	3254	3254	3254
5°	3210	3206	3202
10°	3182	3178	3155
15°	3096	3065	3022
20°	2983	2935	2855
25°	2860	2798	2623
30°	2711	2624	2363
35°	2567	2425	2186
40°	2421	2210	1989
45°	2282	2043	1798
50°	2113	1896	1604
55°	1955	1719	1436
60°	1791	1535	1287
65°	1576	1344	1139
70°	1298	1177	968
75°	1032	901	945
80°	693	650	607
85°	432	519	604

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2282 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.1	4.7
10°-20°	617.9	13.0
20°-30°	855.4	18.0
30°-40°	912.1	19.2
40°-50°	832.1	17.5
50°-60°	651.9	13.7
60°-70°	424.9	8.9
70°-80°	188.2	4.0
80°-90°	40.4	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°	1698.4	35.8
0°-40°	2610.5	55.0
0°-60°	4094.5	86.2
0°-90°	4748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4748.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2419	2419	2419	2419	2419	
5°	2377	2374	2374	2371	2371	226
15°	2223	2223	2200	2178	2170	625
25°	1926	1915	1884	1817	1767	884
35°	1563	1552	1476	1364	1331	977
45°	1200	1174	1074	984	945	924
55°	833	808	733	646	612	747
65°	495	467	422	431	358	488
75°	198	184	173	165	182	213
85°	28	31	34	36	39	39
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2418.6	2418.6	2418.6	2418.6	2418.6
2.5°	2401.8	2401.8	2401.8	2399.0	2399.0
5°	2376.6	2373.8	2373.8	2371.0	2371.0
7.5°	2357.1	2354.3	2351.5	2348.7	2343.1
10°	2329.1	2329.1	2326.3	2312.3	2309.5
12.5°	2284.4	2281.6	2270.4	2250.8	2245.2
15°	2222.8	2222.8	2200.5	2178.1	2169.7
17.5°	2155.7	2152.9	2125.0	2102.6	2091.4
20°	2083.0	2077.5	2049.5	2013.1	1993.6
22.5°	2002.0	2002.0	1968.4	1920.9	1901.3
25°	1926.5	1915.3	1884.5	1817.4	1767.1
27.5°	1839.8	1823.0	1789.5	1694.4	1635.7
30°	1744.7	1736.3	1688.8	1565.8	1521.0
32.5°	1655.3	1641.3	1590.9	1462.3	1426.0
35°	1563.0	1551.8	1476.3	1364.5	1330.9
37.5°	1470.7	1456.7	1361.7	1272.2	1230.3
40°	1378.4	1361.7	1258.2	1177.1	1132.4
42.5°	1291.8	1269.4	1168.7	1082.1	1031.7
45°	1199.5	1174.3	1073.7	984.2	945.1
47.5°	1107.2	1084.9	992.6	900.3	855.6
50°	1009.4	989.8	905.9	813.6	766.1
52.5°	928.3	897.5	816.4	724.2	685.0
55°	833.2	808.1	732.6	645.9	612.3
57.5°	746.5	721.4	651.5	570.4	542.4
60°	665.5	629.1	570.4	500.5	478.1
62.5°	576.0	548.0	497.7	439.0	466.9
65°	494.9	466.9	422.2	430.6	357.9
67.5°	405.4	391.4	352.3	313.2	302.0
70°	329.9	313.2	299.2	257.2	246.1
72.5°	262.8	246.1	226.5	204.1	195.7
75°	198.5	184.5	173.4	165.0	181.7
77.5°	137.0	131.4	123.0	114.6	111.8
80°	89.5	86.7	83.9	81.1	78.3
82.5°	53.1	53.1	53.1	53.1	53.1
85°	28.0	30.8	33.6	36.3	39.1
87.5°	16.8	16.8	19.6	22.4	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)