

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: P562820

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562820
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-LD4-2LO-50-UNV-81-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4795.0 lumens
Efficiency: N/A
Efficacy: 102.5 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

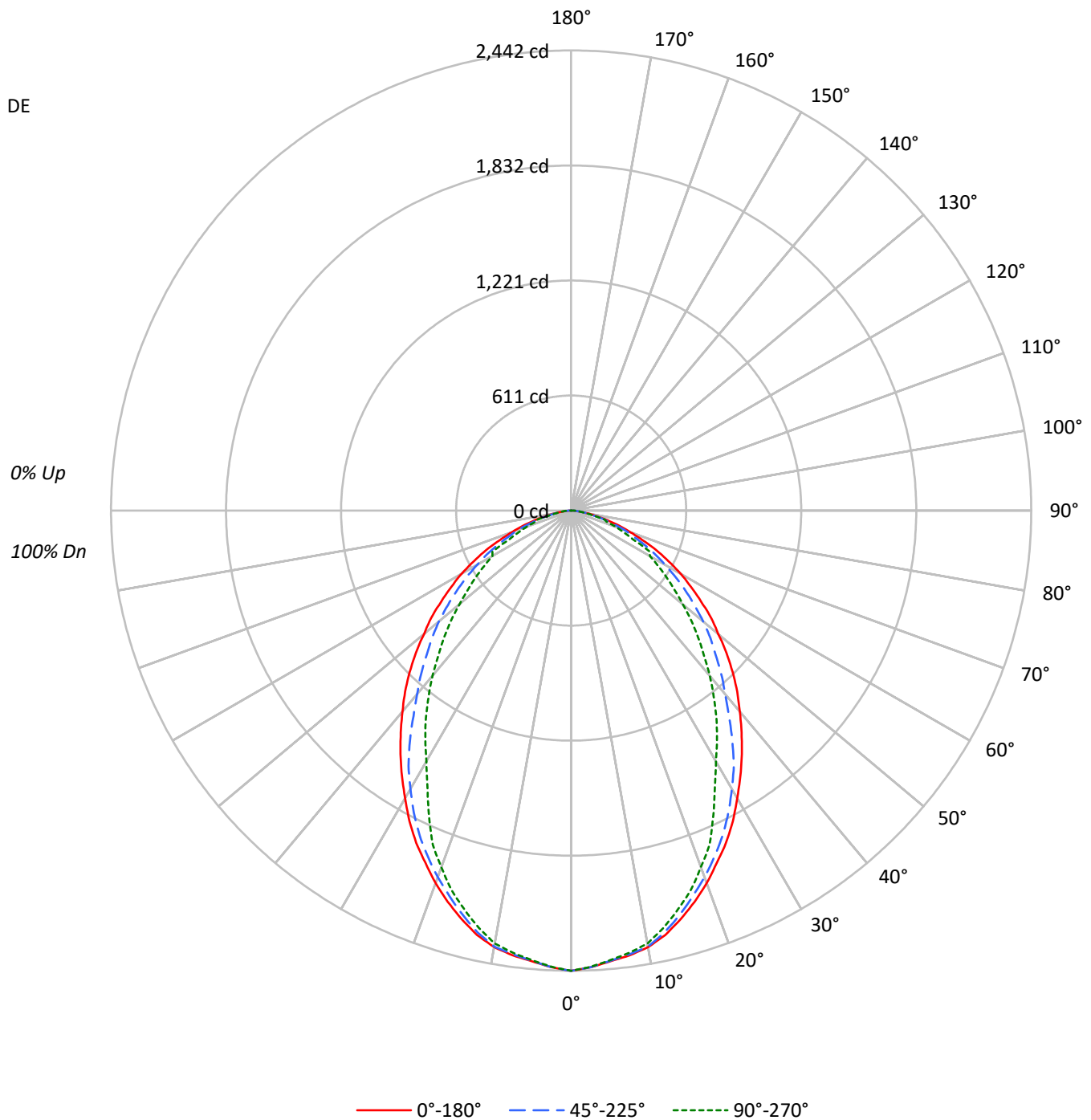
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3286	3286	3286
5°	3242	3238	3234
10°	3214	3210	3187
15°	3127	3096	3052
20°	3012	2964	2883
25°	2888	2825	2649
30°	2738	2650	2387
35°	2593	2449	2208
40°	2445	2232	2009
45°	2305	2063	1816
50°	2134	1915	1620
55°	1974	1735	1451
60°	1808	1550	1299
65°	1591	1358	1151
70°	1311	1188	978
75°	1042	910	954
80°	700	656	613
85°	435	523	610

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2305 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.4	4.7
10°-20°	624.0	13.0
20°-30°	863.9	18.0
30°-40°	921.1	19.2
40°-50°	840.3	17.5
50°-60°	658.3	13.7
60°-70°	429.1	8.9
70°-80°	190.1	4.0
80°-90°	40.8	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°	1715.2	35.8
0°-40°	2636.3	55.0
0°-60°	4135.0	86.2
0°-90°	4795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4795.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2442	2442	2442	2442	2442	
5°	2400	2397	2397	2394	2394	228
15°	2245	2245	2222	2200	2191	631
25°	1946	1934	1903	1835	1785	893
35°	1578	1567	1491	1378	1344	987
45°	1211	1186	1084	994	954	933
55°	842	816	740	652	618	755
65°	500	472	426	435	361	493
75°	200	186	175	167	184	215
85°	28	31	34	37	40	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2442.5	2442.5	2442.5	2442.5	2442.5
2.5°	2425.6	2425.6	2425.6	2422.7	2422.7
5°	2400.2	2397.3	2397.3	2394.5	2394.5
7.5°	2380.4	2377.6	2374.7	2371.9	2366.3
10°	2352.2	2352.2	2349.3	2335.2	2332.4
12.5°	2307.0	2304.1	2292.9	2273.1	2267.4
15°	2244.8	2244.8	2222.3	2199.7	2191.2
17.5°	2177.1	2174.3	2146.0	2123.4	2112.1
20°	2103.7	2098.0	2069.8	2033.1	2013.3
22.5°	2021.8	2021.8	1987.9	1939.9	1920.1
25°	1945.5	1934.2	1903.2	1835.4	1784.6
27.5°	1858.0	1841.1	1807.2	1711.2	1651.9
30°	1762.0	1753.5	1705.5	1581.3	1536.1
32.5°	1671.6	1657.5	1606.7	1476.8	1440.1
35°	1578.5	1567.2	1490.9	1378.0	1344.1
37.5°	1485.3	1471.2	1375.1	1284.8	1242.4
40°	1392.1	1375.1	1270.7	1188.8	1143.6
42.5°	1304.6	1282.0	1180.3	1092.8	1041.9
45°	1211.4	1186.0	1084.3	993.9	954.4
47.5°	1118.2	1095.6	1002.4	909.2	864.1
50°	1019.4	999.6	914.9	821.7	773.7
52.5°	937.5	906.4	824.5	731.3	691.8
55°	841.5	816.1	739.8	652.3	618.4
57.5°	753.9	728.5	657.9	576.0	547.8
60°	672.0	635.3	576.0	505.4	482.9
62.5°	581.7	553.4	502.6	443.3	471.6
65°	499.8	471.6	426.4	434.9	361.4
67.5°	409.4	395.3	355.8	316.3	305.0
70°	333.2	316.3	302.1	259.8	248.5
72.5°	265.4	248.5	228.7	206.1	197.7
75°	200.5	186.4	175.1	166.6	183.5
77.5°	138.4	132.7	124.2	115.8	112.9
80°	90.4	87.5	84.7	81.9	79.1
82.5°	53.7	53.7	53.7	53.7	53.7
85°	28.2	31.1	33.9	36.7	39.5
87.5°	16.9	16.9	19.8	22.6	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)