

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: P562744

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562744
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-40-UNV-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4176.0 lumens
Efficiency: N/A
Efficacy: 89.2 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

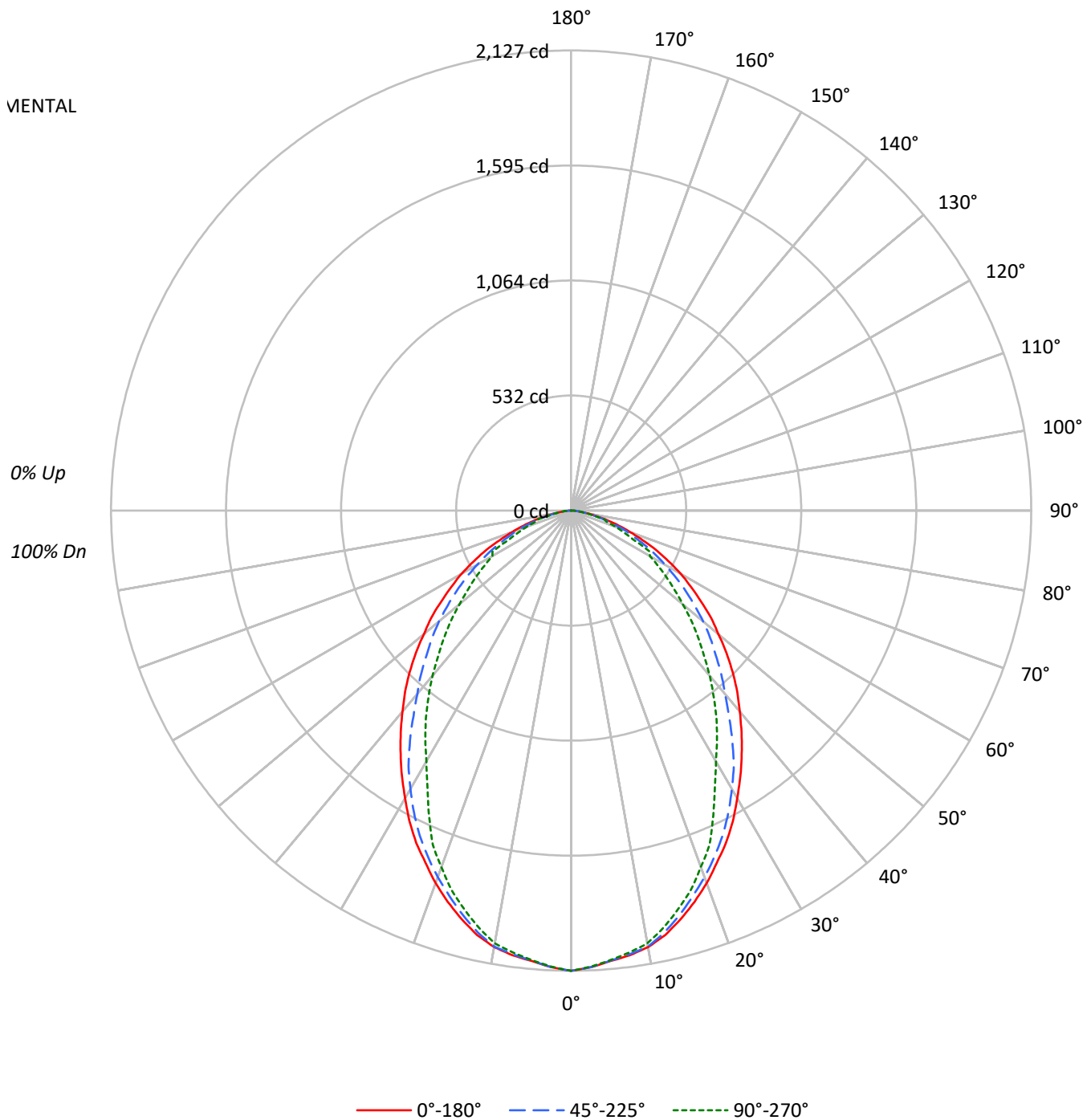
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2862	2862	2862
5°	2823	2820	2817
10°	2799	2795	2775
15°	2723	2696	2658
20°	2623	2581	2511
25°	2515	2461	2307
30°	2384	2308	2078
35°	2258	2133	1923
40°	2129	1944	1749
45°	2007	1797	1582
50°	1858	1668	1410
55°	1719	1511	1263
60°	1575	1350	1132
65°	1386	1182	1002
70°	1142	1035	851
75°	908	793	831
80°	610	572	534
85°	380	455	531

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2007 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.0	4.7
10°-20°	543.4	13.0
20°-30°	752.3	18.0
30°-40°	802.2	19.2
40°-50°	731.9	17.5
50°-60°	573.4	13.7
60°-70°	373.7	8.9
70°-80°	165.6	4.0
80°-90°	35.5	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°	1493.8	35.8
0°-40°	2296.0	55.0
0°-60°	3601.2	86.2
0°-90°	4176.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4176.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2127	2127	2127	2127	2127	
5°	2090	2088	2088	2085	2085	198
15°	1955	1955	1935	1916	1908	550
25°	1694	1684	1658	1598	1554	778
35°	1375	1365	1298	1200	1171	859
45°	1055	1033	944	866	831	813
55°	733	711	644	568	539	657
65°	435	411	371	379	315	429
75°	175	162	152	145	160	187
85°	25	27	30	32	34	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2127.2	2127.2	2127.2	2127.2	2127.2
2.5°	2112.4	2112.4	2112.4	2110.0	2110.0
5°	2090.3	2087.9	2087.9	2085.4	2085.4
7.5°	2073.1	2070.6	2068.2	2065.7	2060.8
10°	2048.5	2048.5	2046.0	2033.7	2031.3
12.5°	2009.2	2006.7	1996.9	1979.6	1974.7
15°	1955.1	1955.1	1935.4	1915.7	1908.3
17.5°	1896.0	1893.6	1869.0	1849.3	1839.5
20°	1832.1	1827.2	1802.6	1770.6	1753.4
22.5°	1760.8	1760.8	1731.3	1689.5	1672.2
25°	1694.4	1684.5	1657.5	1598.5	1554.2
27.5°	1618.1	1603.4	1573.9	1490.3	1438.6
30°	1534.5	1527.2	1485.4	1377.1	1337.8
32.5°	1455.8	1443.5	1399.3	1286.2	1254.2
35°	1374.7	1364.8	1298.5	1200.1	1170.6
37.5°	1293.5	1281.2	1197.6	1118.9	1082.0
40°	1212.4	1197.6	1106.6	1035.3	996.0
42.5°	1136.1	1116.5	1027.9	951.7	907.4
45°	1055.0	1032.9	944.3	865.6	831.2
47.5°	973.8	954.2	873.0	791.9	752.5
50°	887.8	870.6	796.8	715.6	673.8
52.5°	816.5	789.4	718.1	636.9	602.5
55°	732.8	710.7	644.3	568.1	538.6
57.5°	656.6	634.5	573.0	501.7	477.1
60°	585.3	553.3	501.7	440.2	420.5
62.5°	506.6	482.0	437.7	386.1	410.7
65°	435.3	410.7	371.3	378.7	314.8
67.5°	356.6	344.3	309.9	275.4	265.6
70°	290.2	275.4	263.1	226.2	216.4
72.5°	231.2	216.4	199.2	179.5	172.1
75°	174.6	162.3	152.5	145.1	159.8
77.5°	120.5	115.6	108.2	100.8	98.4
80°	78.7	76.2	73.8	71.3	68.9
82.5°	46.7	46.7	46.7	46.7	46.7
85°	24.6	27.1	29.5	32.0	34.4
87.5°	14.8	14.8	17.2	19.7	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)