

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: P590808

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590808
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4LO-35-UNV-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

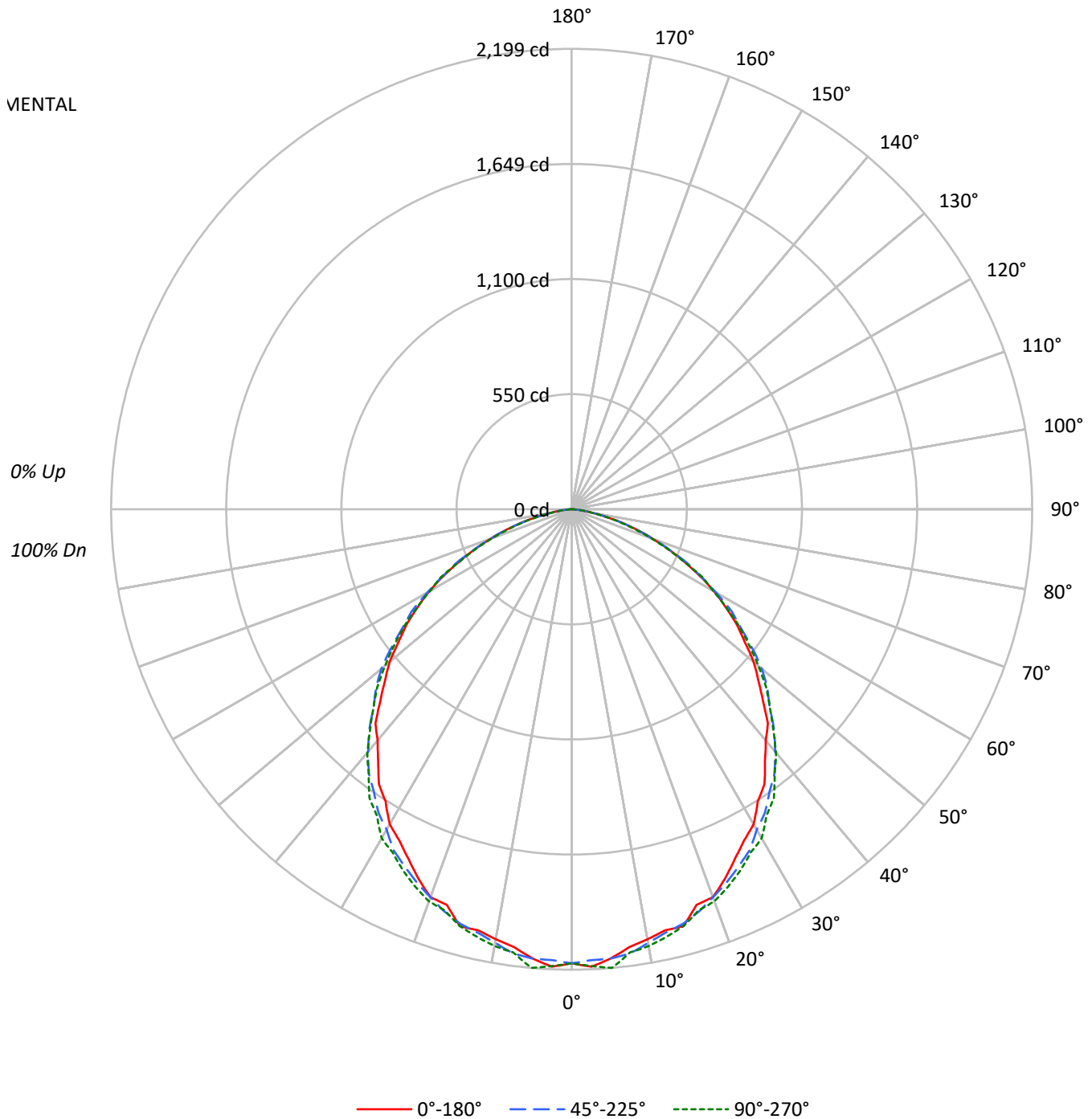
Lumens per Lamp: N/A
Luminaire Lumens: 5465.0 lumens
Efficiency: N/A
Efficacy: 116.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5835	5835	5835
5°	5816	5818	5941
10°	5698	5748	5788
15°	5743	5712	5744
20°	5646	5646	5706
25°	5472	5592	5654
30°	5397	5492	5638
35°	5270	5408	5529
40°	5065	5309	5332
45°	4912	5087	5094
50°	4750	4965	4870
55°	4526	4614	4581
60°	4232	4275	4198
65°	3774	3870	3747
70°	3238	3249	3159
75°	2565	2559	2460
80°	1719	1671	1605
85°	932	926	865

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5218 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.0	3.7
10°-20°	578.1	10.6
20°-30°	866.1	15.8
30°-40°	1026.5	18.8
40°-50°	1028.4	18.8
50°-60°	872.9	16.0
60°-70°	588.5	10.8
70°-80°	258.6	4.7
80°-90°	42.0	0.8
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°	1648.1	30.2
0°-40°	2674.6	48.9
0°-60°	4575.9	83.7
0°-90°	5465.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5465.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2168	2168	2168	2168	2168	
5°	2153	2148	2154	2147	2199	203
15°	2061	2038	2050	2061	2062	574
25°	1843	1853	1883	1908	1904	852
35°	1604	1609	1646	1684	1683	996
45°	1291	1315	1337	1371	1338	998
55°	965	958	984	977	976	858
65°	593	585	608	585	588	589
75°	247	242	246	229	237	264
85°	30	29	30	29	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2168.4	2168.4	2168.4	2168.4	2168.4
2.5°	2187.1	2170.6	2155.2	2173.1	2184.1
5°	2153.0	2147.9	2153.8	2147.4	2199.2
7.5°	2108.7	2128.1	2139.3	2132.3	2135.3
10°	2085.2	2078.5	2103.4	2120.8	2118.3
12.5°	2060.0	2070.1	2071.5	2090.3	2091.9
15°	2061.4	2037.6	2050.2	2060.9	2061.7
17.5°	1981.4	2007.1	2015.8	2040.1	2009.9
20°	1971.6	1952.8	1971.6	1996.5	1992.6
22.5°	1911.4	1890.4	1930.7	1952.8	1951.4
25°	1843.0	1853.1	1883.4	1908.0	1904.1
27.5°	1783.1	1794.9	1838.0	1871.9	1850.0
30°	1736.9	1731.1	1767.5	1797.7	1814.5
32.5°	1654.3	1675.6	1718.2	1748.1	1732.2
35°	1604.2	1609.0	1646.2	1684.3	1683.2
37.5°	1516.6	1538.7	1591.1	1601.7	1591.9
40°	1441.8	1464.0	1511.3	1522.8	1518.0
42.5°	1386.7	1390.6	1431.2	1444.4	1423.4
45°	1290.7	1314.7	1336.6	1371.0	1338.5
47.5°	1208.9	1220.1	1267.1	1276.4	1259.3
50°	1134.7	1138.6	1186.0	1174.5	1163.3
52.5°	1041.5	1058.0	1084.6	1082.4	1069.2
55°	964.8	958.3	983.5	976.8	976.5
57.5°	872.7	883.9	904.6	893.9	876.9
60°	786.4	786.7	794.3	782.2	780.0
62.5°	690.4	693.8	695.4	680.6	704.7
65°	592.7	584.9	607.8	584.6	588.5
67.5°	502.8	506.7	504.5	489.9	495.5
70°	411.6	416.6	413.0	396.4	401.5
72.5°	328.1	322.0	325.9	305.2	314.7
75°	246.7	241.6	246.1	228.7	236.6
77.5°	168.0	171.9	169.1	159.9	165.2
80°	110.9	107.8	107.8	102.5	103.6
82.5°	64.7	61.6	60.8	59.1	61.6
85°	30.2	29.4	30.0	29.1	28.0
87.5°	10.9	11.2	11.2	10.6	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)