

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: P590198

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590198
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-LD4-2HI-50-UNV-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

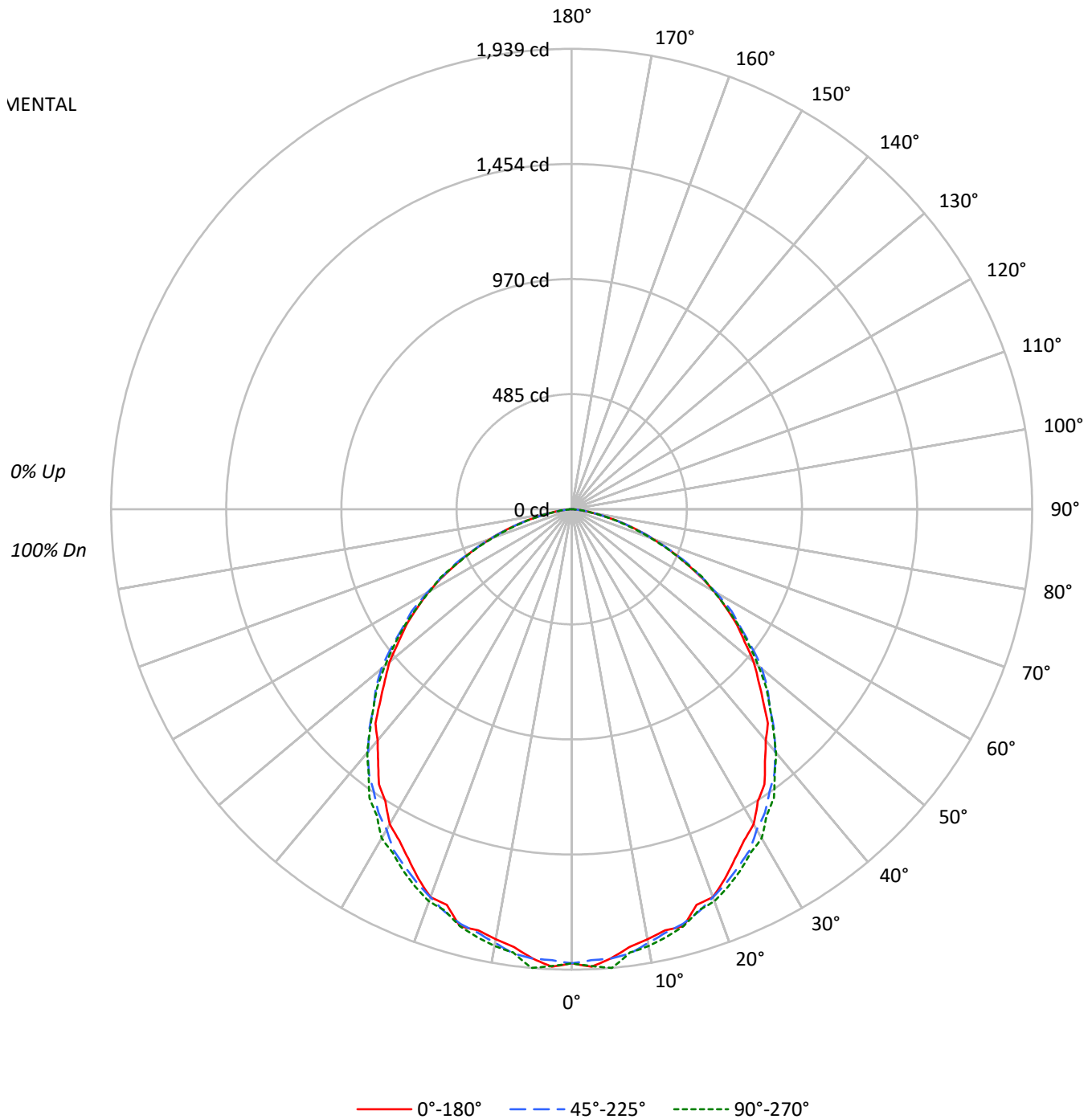
Lumens per Lamp: N/A
Luminaire Lumens: 4819.0 lumens
Efficiency: N/A
Efficacy: 111.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	5145	5145	5145
5°	5128	5130	5238
10°	5024	5068	5104
15°	5064	5037	5065
20°	4979	4979	5031
25°	4825	4931	4985
30°	4759	4843	4972
35°	4647	4769	4876
40°	4466	4681	4702
45°	4331	4485	4492
50°	4189	4378	4294
55°	3991	4069	4040
60°	3732	3770	3702
65°	3328	3413	3304
70°	2855	2865	2785
75°	2261	2256	2169
80°	1516	1472	1415
85°	824	815	763

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4601 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.9	3.7
10°-20°	509.7	10.6
20°-30°	763.7	15.8
30°-40°	905.1	18.8
40°-50°	906.8	18.8
50°-60°	769.7	16.0
60°-70°	519.0	10.8
70°-80°	228.0	4.7
80°-90°	37.1	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°	1453.3	30.2
0°-40°	2358.4	48.9
0°-60°	4035.0	83.7
0°-90°	4819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1912	1912	1912	1912	1912	
5°	1898	1894	1899	1894	1939	179
15°	1818	1797	1808	1817	1818	506
25°	1625	1634	1661	1682	1679	751
35°	1415	1419	1452	1485	1484	878
45°	1138	1159	1179	1209	1180	880
55°	851	845	867	861	861	757
65°	523	516	536	516	519	520
75°	218	213	217	202	209	233
85°	27	26	26	26	25	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1912.1	1912.1	1912.1	1912.1	1912.1
2.5°	1928.6	1914.0	1900.5	1916.3	1925.9
5°	1898.5	1894.0	1899.2	1893.5	1939.2
7.5°	1859.5	1876.5	1886.4	1880.2	1882.9
10°	1838.7	1832.8	1854.8	1870.1	1867.9
12.5°	1816.5	1825.4	1826.6	1843.2	1844.7
15°	1817.8	1796.8	1807.9	1817.3	1818.0
17.5°	1747.1	1769.9	1777.5	1799.0	1772.3
20°	1738.5	1722.0	1738.5	1760.5	1757.0
22.5°	1685.4	1666.9	1702.5	1722.0	1720.7
25°	1625.2	1634.1	1660.7	1682.5	1679.0
27.5°	1572.4	1582.7	1620.7	1650.6	1631.4
30°	1531.6	1526.4	1558.5	1585.2	1600.0
32.5°	1458.8	1477.6	1515.1	1541.5	1527.4
35°	1414.6	1418.8	1451.6	1485.2	1484.2
37.5°	1337.3	1356.8	1403.0	1412.4	1403.7
40°	1271.4	1290.9	1332.6	1342.8	1338.6
42.5°	1222.8	1226.2	1262.0	1273.6	1255.1
45°	1138.1	1159.3	1178.6	1209.0	1180.3
47.5°	1066.0	1075.9	1117.4	1125.5	1110.4
50°	1000.6	1004.0	1045.8	1035.6	1025.8
52.5°	918.4	932.9	956.4	954.4	942.8
55°	850.7	845.1	867.3	861.4	861.1
57.5°	769.5	779.4	797.7	788.3	773.2
60°	693.5	693.7	700.4	689.8	687.8
62.5°	608.8	611.8	613.2	600.2	621.4
65°	522.6	515.7	536.0	515.5	518.9
67.5°	443.4	446.8	444.9	432.0	437.0
70°	362.9	367.4	364.1	349.6	354.0
72.5°	289.3	283.9	287.4	269.1	277.5
75°	217.5	213.1	217.0	201.7	208.6
77.5°	148.1	151.6	149.1	141.0	145.7
80°	97.8	95.0	95.0	90.4	91.3
82.5°	57.0	54.3	53.6	52.1	54.3
85°	26.7	25.9	26.4	25.7	24.7
87.5°	9.6	9.9	9.9	9.4	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)