

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: P590433

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590433
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-LD4-3HI-35-UNV-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5759.0 lumens
Efficiency: N/A
Efficacy: 88.9 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

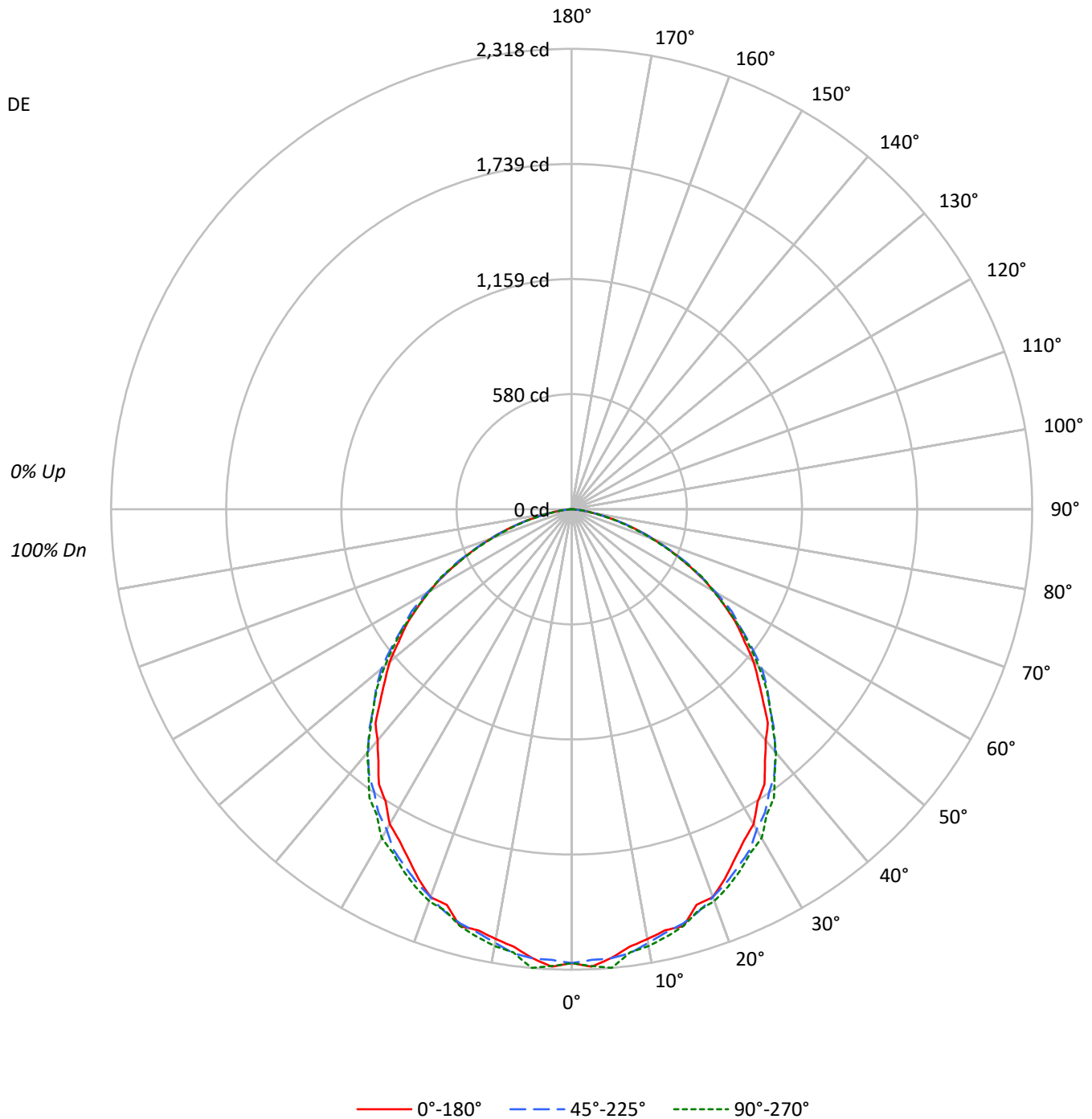
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590433

CATALOG NUMBER: FSR-24-2-LD4-3HI-35-UNV-81-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590433

CATALOG NUMBER: FSR-24-2-LD4-3HI-35-UNV-81-88-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6149	6149	6149
5°	6129	6131	6260
10°	6004	6057	6099
15°	6052	6019	6053
20°	5950	5950	6013
25°	5767	5893	5958
30°	5688	5787	5941
35°	5553	5699	5827
40°	5337	5595	5619
45°	5176	5360	5368
50°	5006	5232	5132
55°	4770	4862	4828
60°	4460	4505	4424
65°	3977	4078	3949
70°	3412	3424	3329
75°	2702	2696	2592
80°	1810	1760	1692
85°	985	976	911

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5498 cd/sqm



TEST NUMBER: P590433

CATALOG NUMBER: FSR-24-2-LD4-3HI-35-UNV-81-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.9	3.7
10°-20°	609.2	10.6
20°-30°	912.7	15.8
30°-40°	1081.7	18.8
40°-50°	1083.7	18.8
50°-60°	919.9	16.0
60°-70°	620.2	10.8
70°-80°	272.5	4.7
80°-90°	44.3	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°	1736.8	30.2
0°-40°	2818.5	48.9
0°-60°	4822.0	83.7
0°-90°	5759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5759.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2285	2285	2285	2285	2285	
5°	2269	2264	2270	2263	2318	214
15°	2172	2147	2160	2172	2173	605
25°	1942	1953	1985	2011	2006	898
35°	1690	1696	1735	1775	1774	1050
45°	1360	1386	1408	1445	1410	1052
55°	1017	1010	1036	1029	1029	904
65°	625	616	640	616	620	621
75°	260	255	259	241	249	279
85°	32	31	32	31	30	46
90°	0	0	0	0	0	



TEST NUMBER: P590433

CATALOG NUMBER: FSR-24-2-LD4-3HI-35-UNV-81-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2285.0	2285.0	2285.0	2285.0	2285.0
2.5°	2304.8	2287.4	2271.2	2290.0	2301.5
5°	2268.8	2263.5	2269.7	2262.9	2317.5
7.5°	2222.2	2242.5	2254.3	2247.0	2250.2
10°	2197.4	2190.3	2216.6	2234.9	2232.2
12.5°	2170.8	2181.5	2182.9	2202.7	2204.5
15°	2172.3	2147.2	2160.5	2171.7	2172.6
17.5°	2087.9	2115.1	2124.2	2149.9	2118.0
20°	2077.6	2057.9	2077.6	2103.9	2099.7
22.5°	2014.2	1992.1	2034.5	2057.9	2056.4
25°	1942.2	1952.8	1984.7	2010.6	2006.5
27.5°	1879.1	1891.5	1936.9	1972.6	1949.6
30°	1830.4	1824.2	1862.5	1894.4	1912.1
32.5°	1743.3	1765.8	1810.6	1842.2	1825.4
35°	1690.5	1695.6	1734.8	1774.9	1773.7
37.5°	1598.2	1621.5	1676.7	1687.9	1677.6
40°	1519.4	1542.7	1592.6	1604.7	1599.7
42.5°	1461.3	1465.4	1508.2	1522.1	1499.9
45°	1360.1	1385.5	1408.5	1444.8	1410.5
47.5°	1273.9	1285.8	1335.3	1345.1	1327.1
50°	1195.8	1199.9	1249.8	1237.7	1225.9
52.5°	1097.5	1114.9	1143.0	1140.6	1126.7
55°	1016.7	1009.9	1036.4	1029.4	1029.1
57.5°	919.6	931.4	953.2	942.0	924.0
60°	828.7	829.0	837.0	824.3	822.0
62.5°	727.5	731.1	732.9	717.2	742.6
65°	624.6	616.3	640.5	616.0	620.2
67.5°	529.9	534.0	531.6	516.3	522.2
70°	433.7	439.0	435.2	417.8	423.1
72.5°	345.8	339.3	343.4	321.6	331.6
75°	259.9	254.6	259.3	241.0	249.3
77.5°	177.0	181.1	178.2	168.5	174.1
80°	116.8	113.6	113.6	108.0	109.2
82.5°	68.2	64.9	64.0	62.3	64.9
85°	31.9	31.0	31.6	30.7	29.5
87.5°	11.5	11.8	11.8	11.2	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)