

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: P563320

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563320
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-LD4-3LO-40-UNV-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

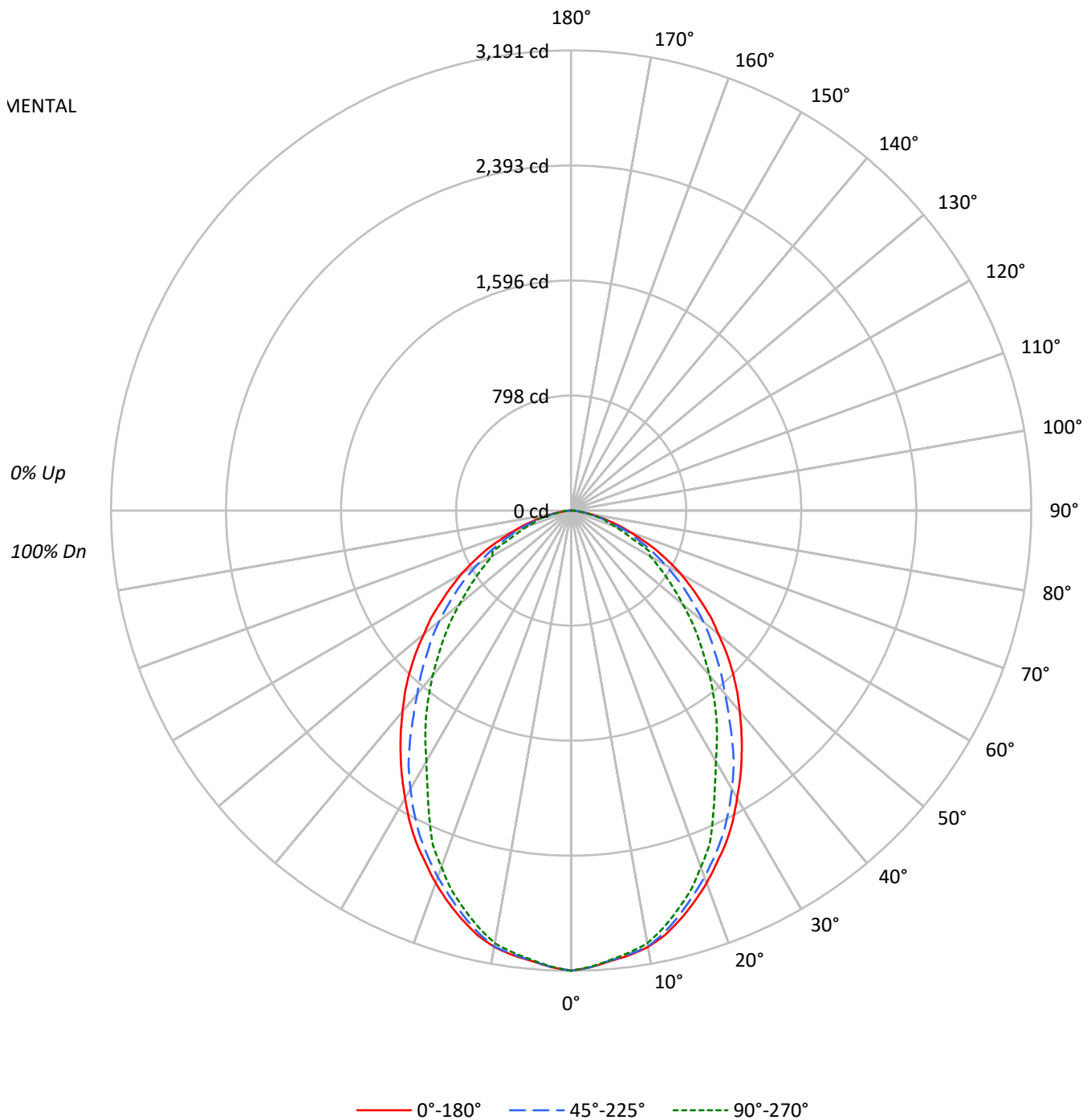
Lumens per Lamp: N/A
Luminaire Lumens: 6264.0 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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



TEST NUMBER: P563320
CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-80-88-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563320

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-80-88-EDD-90

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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4293	4293	4293
5°	4235	4230	4225
10°	4198	4193	4163
15°	4085	4044	3987
20°	3935	3872	3766
25°	3773	3691	3461
30°	3576	3462	3118
35°	3387	3199	2884
40°	3194	2916	2624
45°	3011	2695	2372
50°	2788	2502	2116
55°	2579	2267	1895
60°	2362	2025	1697
65°	2079	1773	1503
70°	1712	1553	1277
75°	1362	1189	1247
80°	914	858	800
85°	570	684	797

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3011 cd/sqm



TEST NUMBER: P563320

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-80-88-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.0	4.7
10°-20°	815.2	13.0
20°-30°	1128.5	18.0
30°-40°	1203.3	19.2
40°-50°	1097.8	17.5
50°-60°	860.0	13.7
60°-70°	560.5	8.9
70°-80°	248.3	4.0
80°-90°	53.3	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°	2240.7	35.8
0°-40°	3444.0	55.0
0°-60°	5401.8	86.2
0°-90°	6264.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6264.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3191	3191	3191	3191	3191	
5°	3136	3132	3132	3128	3128	298
15°	2933	2933	2903	2874	2862	824
25°	2542	2527	2486	2398	2331	1167
35°	2062	2047	1948	1800	1756	1289
45°	1582	1549	1416	1298	1247	1219
55°	1099	1066	966	852	808	986
65°	653	616	557	568	472	643
75°	262	244	229	218	240	281
85°	37	41	44	48	52	51
90°	0	0	0	0	0	



TEST NUMBER: P563320

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-80-88-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3190.8	3190.8	3190.8	3190.8	3190.8
2.5°	3168.7	3168.7	3168.7	3165.0	3165.0
5°	3135.5	3131.8	3131.8	3128.1	3128.1
7.5°	3109.6	3106.0	3102.3	3098.6	3091.2
10°	3072.8	3072.8	3069.1	3050.6	3046.9
12.5°	3013.7	3010.0	2995.3	2969.5	2962.1
15°	2932.6	2932.6	2903.1	2873.6	2862.5
17.5°	2844.1	2840.4	2803.5	2774.0	2759.2
20°	2748.1	2740.8	2703.9	2655.9	2630.1
22.5°	2641.2	2641.2	2596.9	2534.2	2508.4
25°	2541.6	2526.8	2486.2	2397.7	2331.3
27.5°	2427.2	2405.1	2360.8	2235.4	2157.9
30°	2301.8	2290.7	2228.0	2065.7	2006.7
32.5°	2183.8	2165.3	2098.9	1929.2	1881.3
35°	2062.0	2047.3	1947.7	1800.1	1755.9
37.5°	1940.3	1921.9	1796.4	1678.4	1623.1
40°	1818.6	1796.4	1660.0	1553.0	1494.0
42.5°	1704.2	1674.7	1541.9	1427.6	1361.2
45°	1582.5	1549.3	1416.5	1298.5	1246.8
47.5°	1460.8	1431.2	1309.5	1187.8	1128.8
50°	1331.7	1305.8	1195.2	1073.4	1010.7
52.5°	1224.7	1184.1	1077.1	955.4	903.8
55°	1099.3	1066.1	966.5	852.1	807.8
57.5°	984.9	951.7	859.5	752.5	715.6
60°	877.9	830.0	752.5	660.3	630.8
62.5°	759.9	723.0	656.6	579.1	616.0
65°	652.9	616.0	557.0	568.1	472.2
67.5°	534.9	516.4	464.8	413.1	398.4
70°	435.3	413.1	394.7	339.4	324.6
72.5°	346.7	324.6	298.8	269.3	258.2
75°	261.9	243.5	228.7	217.6	239.8
77.5°	180.8	173.4	162.3	151.2	147.6
80°	118.0	114.4	110.7	107.0	103.3
82.5°	70.1	70.1	70.1	70.1	70.1
85°	36.9	40.6	44.3	48.0	51.6
87.5°	22.1	22.1	25.8	29.5	33.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)