

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: P563508

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563508
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-LD4-3STD-40-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9628.0 lumens
Efficiency: N/A
Efficacy: 96.4 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

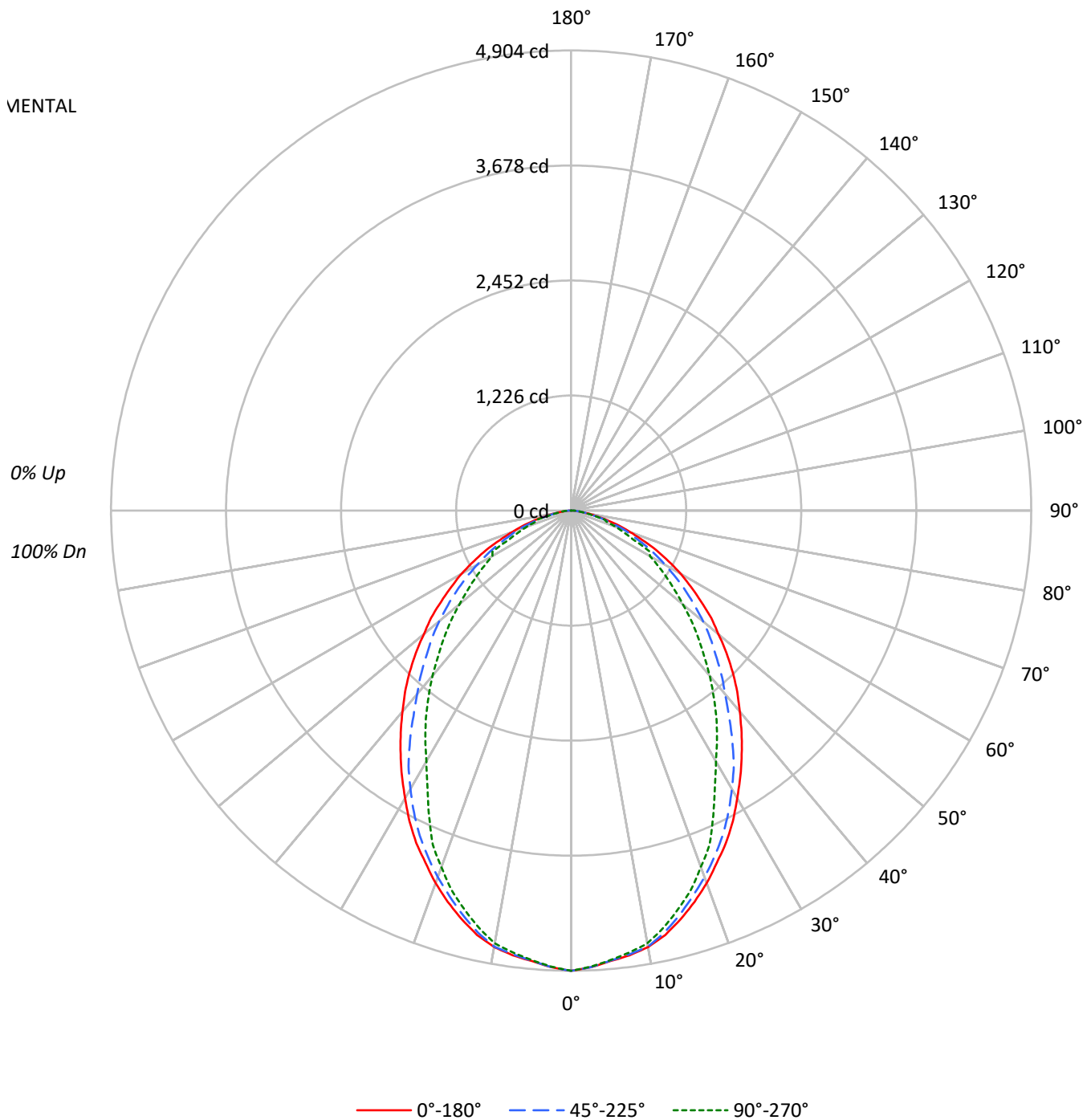
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563508

CATALOG NUMBER: FSR-24-4-LD4-3STD-40-UNV-80-86-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563508

CATALOG NUMBER: FSR-24-4-LD4-3STD-40-UNV-80-86-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	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°	6599	6599	6599
5°	6509	6502	6494
10°	6453	6445	6399
15°	6279	6215	6129
20°	6048	5951	5788
25°	5800	5673	5320
30°	5497	5321	4792
35°	5206	4917	4433
40°	4910	4481	4033
45°	4628	4143	3647
50°	4284	3845	3252
55°	3963	3485	2913
60°	3631	3112	2609
65°	3195	2726	2310
70°	2632	2387	1963
75°	2093	1827	1916
80°	1406	1318	1230
85°	875	1050	1226

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4628 cd/sqm



TEST NUMBER: P563508

CATALOG NUMBER: FSR-24-4-LD4-3STD-40-UNV-80-86-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	456.5	4.7
10°-20°	1252.9	13.0
20°-30°	1734.6	18.0
30°-40°	1849.6	19.2
40°-50°	1687.3	17.5
50°-60°	1321.9	13.7
60°-70°	861.5	8.9
70°-80°	381.7	4.0
80°-90°	81.9	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°	3444.0	35.8
0°-40°	5293.6	55.0
0°-60°	8302.8	86.2
0°-90°	9628.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9628.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4904	4904	4904	4904	4904	
5°	4819	4814	4814	4808	4808	457
15°	4508	4508	4462	4417	4400	1267
25°	3906	3884	3821	3685	3583	1793
35°	3169	3147	2994	2767	2699	1981
45°	2432	2381	2177	1996	1916	1874
55°	1690	1639	1486	1310	1242	1515
65°	1004	947	856	873	726	989
75°	403	374	352	334	368	431
85°	57	62	68	74	79	79
90°	0	0	0	0	0	



TEST NUMBER: P563508

CATALOG NUMBER: FSR-24-4-LD4-3STD-40-UNV-80-86-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4904.4	4904.4	4904.4	4904.4	4904.4
2.5°	4870.4	4870.4	4870.4	4864.7	4864.7
5°	4819.3	4813.7	4813.7	4808.0	4808.0
7.5°	4779.6	4774.0	4768.3	4762.6	4751.3
10°	4722.9	4722.9	4717.3	4688.9	4683.3
12.5°	4632.2	4626.6	4603.9	4564.2	4552.8
15°	4507.5	4507.5	4462.1	4416.8	4399.8
17.5°	4371.4	4365.7	4309.0	4263.7	4241.0
20°	4224.0	4212.7	4156.0	4082.3	4042.6
22.5°	4059.6	4059.6	3991.5	3895.2	3855.5
25°	3906.5	3883.8	3821.4	3685.4	3583.3
27.5°	3730.7	3696.7	3628.7	3435.9	3316.8
30°	3538.0	3520.9	3424.6	3175.1	3084.4
32.5°	3356.5	3328.2	3226.1	2965.3	2891.6
35°	3169.4	3146.7	2993.7	2766.9	2698.8
37.5°	2982.3	2954.0	2761.2	2579.8	2494.7
40°	2795.2	2761.2	2551.4	2387.0	2296.3
42.5°	2619.4	2574.1	2370.0	2194.2	2092.2
45°	2432.3	2381.3	2177.2	1995.8	1916.4
47.5°	2245.2	2199.9	2012.8	1825.7	1735.0
50°	2046.8	2007.1	1837.0	1649.9	1553.5
52.5°	1882.4	1820.0	1655.6	1468.5	1389.1
55°	1689.6	1638.6	1485.5	1309.7	1241.7
57.5°	1513.8	1462.8	1321.1	1156.6	1099.9
60°	1349.4	1275.7	1156.6	1014.9	969.5
62.5°	1168.0	1111.3	1009.2	890.2	946.9
65°	1003.6	946.9	856.1	873.1	725.7
67.5°	822.1	793.8	714.4	635.0	612.3
70°	669.0	635.0	606.7	521.6	498.9
72.5°	533.0	498.9	459.3	413.9	396.9
75°	402.6	374.2	351.5	334.5	368.5
77.5°	277.8	266.5	249.5	232.5	226.8
80°	181.4	175.8	170.1	164.4	158.8
82.5°	107.7	107.7	107.7	107.7	107.7
85°	56.7	62.4	68.0	73.7	79.4
87.5°	34.0	34.0	39.7	45.4	51.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)