

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: P563960

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563960
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-LD4-4LO-50-UNV-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

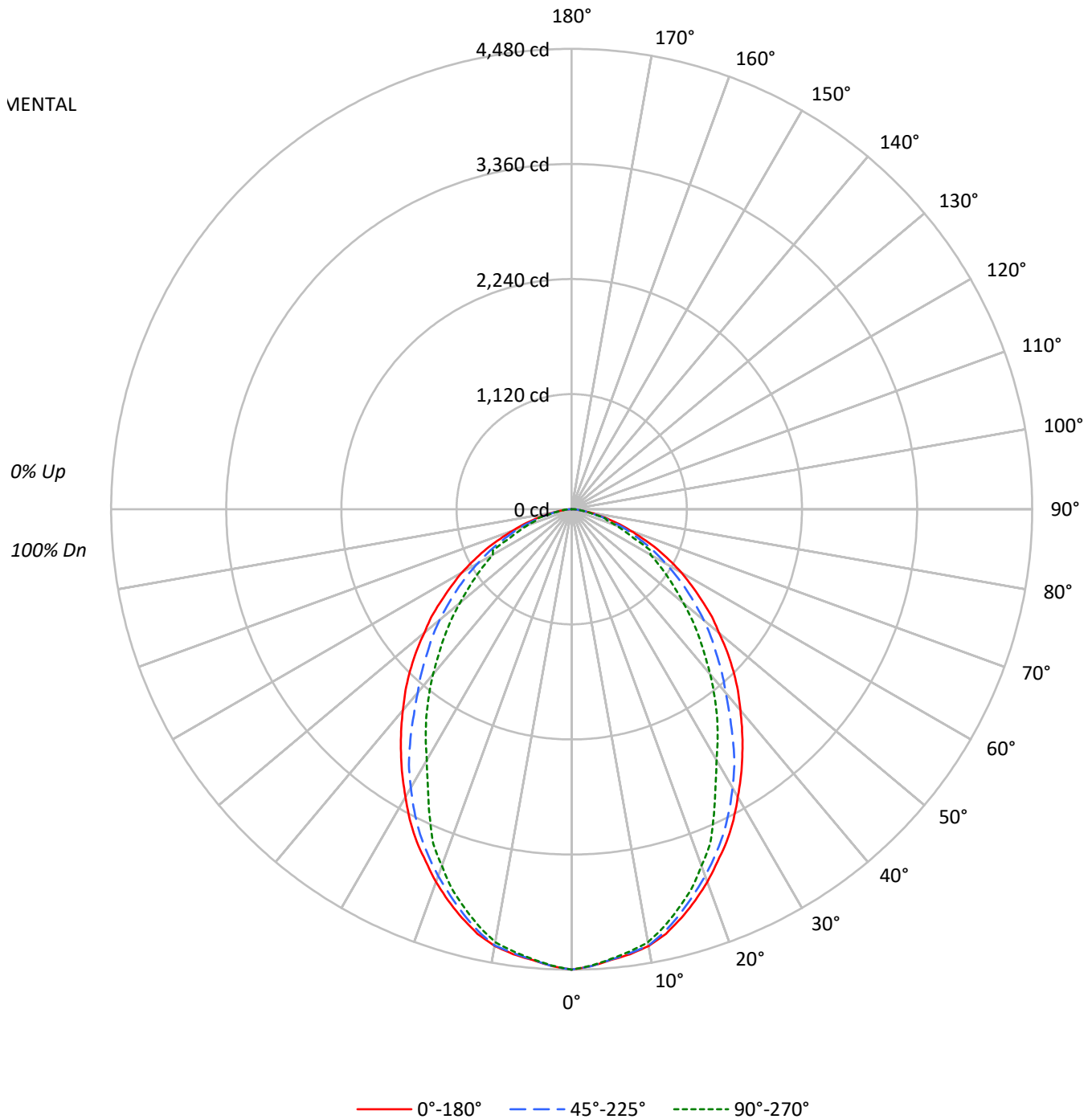
Lumens per Lamp: N/A
Luminaire Lumens: 8795.0 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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: P563960
CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-80-88-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563960

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-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	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°	6028	6028	6028
5°	5946	5939	5932
10°	5894	5887	5845
15°	5735	5678	5598
20°	5525	5436	5287
25°	5298	5182	4859
30°	5021	4860	4377
35°	4755	4492	4049
40°	4485	4094	3684
45°	4228	3784	3331
50°	3914	3513	2970
55°	3620	3183	2661
60°	3317	2843	2383
65°	2918	2490	2110
70°	2404	2180	1793
75°	1912	1669	1750
80°	1284	1204	1124
85°	800	960	1119

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4228 cd/sqm



TEST NUMBER: P563960

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-80-88-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.0	4.7
10°-20°	1144.5	13.0
20°-30°	1584.5	18.0
30°-40°	1689.5	19.2
40°-50°	1541.4	17.5
50°-60°	1207.5	13.7
60°-70°	787.0	8.9
70°-80°	348.7	4.0
80°-90°	74.9	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°	3146.0	35.8
0°-40°	4835.6	55.0
0°-60°	7584.5	86.2
0°-90°	8795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8795.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4480	4480	4480	4480	4480	
5°	4402	4397	4397	4392	4392	418
15°	4118	4118	4076	4035	4019	1158
25°	3568	3548	3491	3366	3273	1638
35°	2895	2874	2735	2528	2465	1810
45°	2222	2175	1989	1823	1751	1712
55°	1543	1497	1357	1196	1134	1384
65°	917	865	782	798	663	903
75°	368	342	321	306	337	394
85°	52	57	62	67	72	72
90°	0	0	0	0	0	



TEST NUMBER: P563960

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-80-88-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4480.1	4480.1	4480.1	4480.1	4480.1
2.5°	4449.0	4449.0	4449.0	4443.8	4443.8
5°	4402.4	4397.2	4397.2	4392.0	4392.0
7.5°	4366.1	4360.9	4355.8	4350.6	4340.2
10°	4314.3	4314.3	4309.1	4283.2	4278.1
12.5°	4231.5	4226.3	4205.6	4169.3	4158.9
15°	4117.5	4117.5	4076.1	4034.6	4019.1
17.5°	3993.2	3988.0	3936.2	3894.8	3874.1
20°	3858.5	3848.2	3796.4	3729.1	3692.8
22.5°	3708.3	3708.3	3646.2	3558.1	3521.9
25°	3568.5	3547.8	3490.8	3366.5	3273.3
27.5°	3407.9	3376.9	3314.7	3138.6	3029.9
30°	3231.9	3216.3	3128.3	2900.4	2817.5
32.5°	3066.1	3040.2	2947.0	2708.8	2641.4
35°	2895.2	2874.5	2734.6	2527.5	2465.3
37.5°	2724.3	2698.4	2522.3	2356.6	2278.9
40°	2553.4	2522.3	2330.7	2180.5	2097.6
42.5°	2392.8	2351.4	2164.9	2004.4	1911.1
45°	2221.9	2175.3	1988.8	1823.1	1750.6
47.5°	2051.0	2009.6	1838.6	1667.7	1584.9
50°	1869.7	1833.5	1678.1	1507.2	1419.1
52.5°	1719.5	1662.5	1512.3	1341.4	1268.9
55°	1543.4	1496.8	1357.0	1196.4	1134.3
57.5°	1382.9	1336.2	1206.8	1056.6	1004.8
60°	1232.7	1165.3	1056.6	927.1	885.7
62.5°	1066.9	1015.1	921.9	813.1	864.9
65°	916.7	864.9	782.1	797.6	662.9
67.5°	751.0	725.1	652.6	580.1	559.4
70°	611.2	580.1	554.2	476.5	455.8
72.5°	486.8	455.8	419.5	378.1	362.5
75°	367.7	341.8	321.1	305.6	336.7
77.5°	253.8	243.4	227.9	212.3	207.2
80°	165.7	160.6	155.4	150.2	145.0
82.5°	98.4	98.4	98.4	98.4	98.4
85°	51.8	57.0	62.2	67.3	72.5
87.5°	31.1	31.1	36.3	41.4	46.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)