

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: P563952

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563952
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-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10416.0 lumens
Efficiency: N/A
Efficacy: 111.3 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

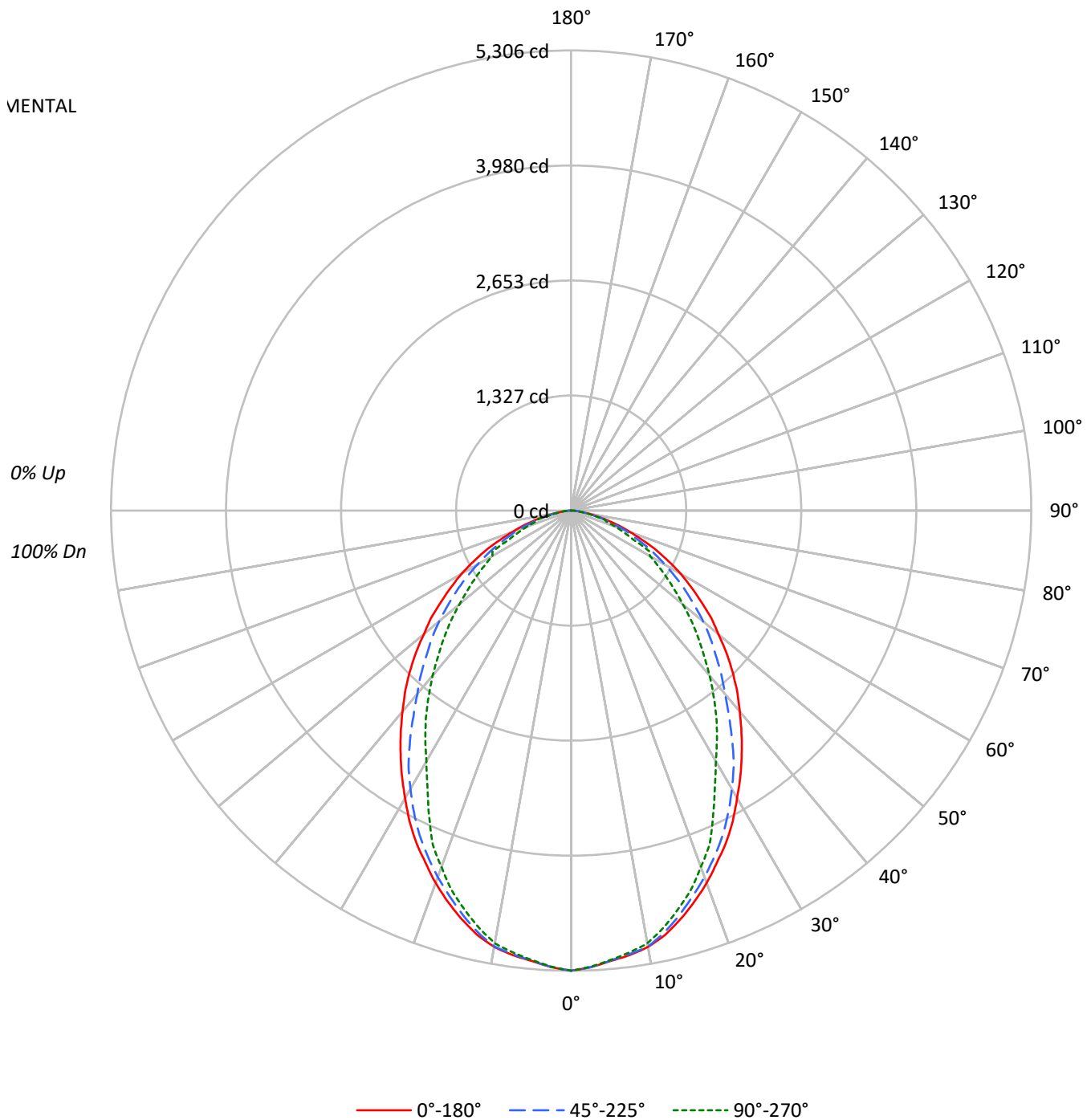
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7139	7139	7139
5°	7042	7034	7025
10°	6981	6972	6922
15°	6793	6724	6630
20°	6543	6438	6262
25°	6274	6138	5755
30°	5947	5756	5184
35°	5632	5320	4796
40°	5311	4848	4363
45°	5007	4482	3945
50°	4635	4160	3518
55°	4288	3770	3151
60°	3929	3367	2823
65°	3457	2949	2500
70°	2847	2582	2124
75°	2264	1977	2073
80°	1521	1426	1330
85°	946	1136	1326

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5007 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	493.9	4.7
10°-20°	1355.5	13.0
20°-30°	1876.5	18.0
30°-40°	2000.9	19.2
40°-50°	1825.4	17.5
50°-60°	1430.1	13.7
60°-70°	932.1	8.9
70°-80°	412.9	4.0
80°-90°	88.6	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°	3725.9	35.8
0°-40°	5726.8	55.0
0°-60°	8982.3	86.2
0°-90°	10416.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10416.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5306	5306	5306	5306	5306	
5°	5214	5208	5208	5202	5202	495
15°	4876	4876	4827	4778	4760	1371
25°	4226	4202	4134	3987	3877	1940
35°	3429	3404	3239	2993	2920	2144
45°	2631	2576	2355	2159	2073	2027
55°	1828	1773	1607	1417	1343	1639
65°	1086	1024	926	945	785	1070
75°	436	405	380	362	399	467
85°	61	68	74	80	86	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5305.8	5305.8	5305.8	5305.8	5305.8
2.5°	5269.0	5269.0	5269.0	5262.8	5262.8
5°	5213.8	5207.6	5207.6	5201.5	5201.5
7.5°	5170.8	5164.7	5158.6	5152.4	5140.2
10°	5109.5	5109.5	5103.4	5072.7	5066.6
12.5°	5011.3	5005.2	4980.7	4937.7	4925.5
15°	4876.4	4876.4	4827.3	4778.3	4759.9
17.5°	4729.2	4723.1	4661.7	4612.6	4588.1
20°	4569.7	4557.4	4496.1	4416.4	4373.4
22.5°	4391.8	4391.8	4318.2	4213.9	4171.0
25°	4226.2	4201.7	4134.2	3987.0	3876.6
27.5°	4036.1	3999.3	3925.7	3717.1	3588.3
30°	3827.5	3809.1	3704.8	3435.0	3336.8
32.5°	3631.2	3600.6	3490.2	3208.0	3128.3
35°	3428.8	3404.3	3238.7	2993.3	2919.7
37.5°	3226.4	3195.7	2987.2	2790.9	2698.9
40°	3024.0	2987.2	2760.2	2582.3	2484.2
42.5°	2833.8	2784.8	2563.9	2373.8	2263.4
45°	2631.4	2576.2	2355.4	2159.1	2073.2
47.5°	2429.0	2379.9	2177.5	1975.1	1877.0
50°	2214.3	2171.4	1987.4	1784.9	1680.7
52.5°	2036.4	1969.0	1791.1	1588.7	1502.8
55°	1827.9	1772.7	1607.1	1416.9	1343.3
57.5°	1637.7	1582.5	1429.2	1251.3	1190.0
60°	1459.9	1380.1	1251.3	1098.0	1048.9
62.5°	1263.6	1202.2	1091.8	963.0	1024.4
65°	1085.7	1024.4	926.2	944.6	785.1
67.5°	889.4	858.7	772.9	687.0	662.5
70°	723.8	687.0	656.3	564.3	539.8
72.5°	576.6	539.8	496.8	447.8	429.4
75°	435.5	404.8	380.3	361.9	398.7
77.5°	300.6	288.3	269.9	251.5	245.4
80°	196.3	190.1	184.0	177.9	171.7
82.5°	116.5	116.5	116.5	116.5	116.5
85°	61.3	67.5	73.6	79.7	85.9
87.5°	36.8	36.8	42.9	49.1	55.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)