

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: P563566

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563566
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-93-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9514.0 lumens
Efficiency: N/A
Efficacy: 95.2 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

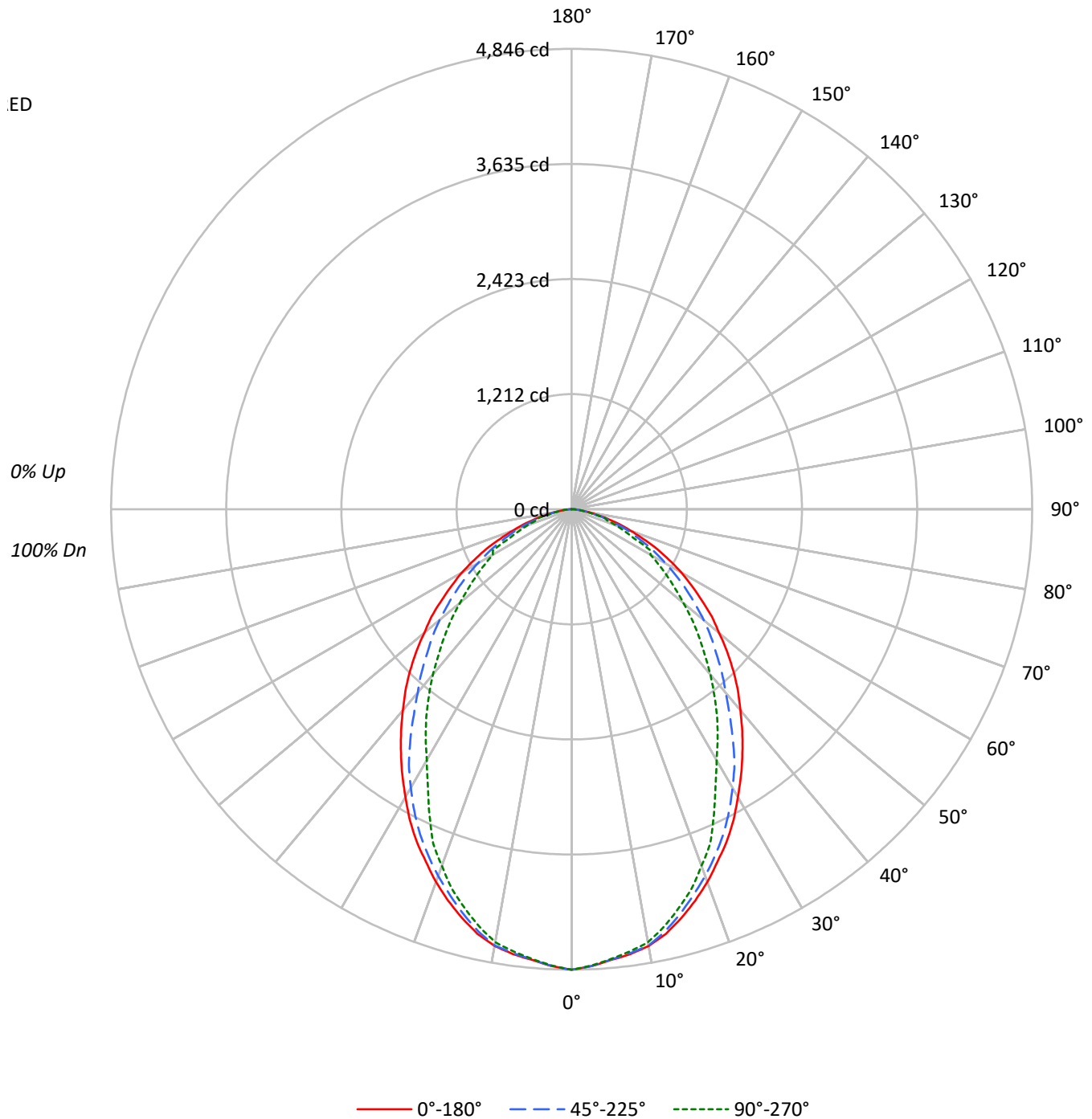
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6521	6521	6521
5°	6432	6425	6417
10°	6376	6369	6323
15°	6204	6142	6056
20°	5976	5880	5720
25°	5731	5606	5257
30°	5432	5258	4735
35°	5144	4859	4380
40°	4851	4428	3985
45°	4573	4094	3603
50°	4234	3800	3213
55°	3917	3443	2878
60°	3588	3076	2578
65°	3157	2693	2283
70°	2601	2358	1939
75°	2068	1806	1893
80°	1389	1303	1216
85°	865	1037	1210

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4573 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	451.1	4.7
10°-20°	1238.1	13.0
20°-30°	1714.0	18.0
30°-40°	1827.7	19.2
40°-50°	1667.3	17.5
50°-60°	1306.2	13.7
60°-70°	851.3	8.9
70°-80°	377.2	4.0
80°-90°	81.0	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°	3403.2	35.8
0°-40°	5230.9	55.0
0°-60°	8204.5	86.2
0°-90°	9514.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9514.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4846	4846	4846	4846	4846	
5°	4762	4757	4757	4751	4751	452
15°	4454	4454	4409	4364	4348	1252
25°	3860	3838	3776	3642	3541	1772
35°	3132	3110	2958	2734	2667	1958
45°	2404	2353	2151	1972	1894	1851
55°	1670	1619	1468	1294	1227	1498
65°	992	936	846	863	717	977
75°	398	370	347	331	364	426
85°	56	62	67	73	78	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4846.3	4846.3	4846.3	4846.3	4846.3
2.5°	4812.7	4812.7	4812.7	4807.1	4807.1
5°	4762.3	4756.7	4756.7	4751.1	4751.1
7.5°	4723.0	4717.4	4711.8	4706.2	4695.0
10°	4667.0	4667.0	4661.4	4633.4	4627.8
12.5°	4577.4	4571.8	4549.4	4510.1	4498.9
15°	4454.1	4454.1	4409.3	4364.5	4347.7
17.5°	4319.7	4314.1	4258.0	4213.2	4190.8
20°	4174.0	4162.8	4106.8	4033.9	3994.7
22.5°	4011.5	4011.5	3944.3	3849.0	3809.8
25°	3860.2	3837.8	3776.2	3641.7	3540.9
27.5°	3686.6	3652.9	3585.7	3395.2	3277.6
30°	3496.1	3479.3	3384.0	3137.5	3047.8
32.5°	3316.8	3288.8	3187.9	2930.2	2857.4
35°	3131.9	3109.5	2958.2	2734.1	2666.9
37.5°	2947.0	2919.0	2728.5	2549.2	2465.2
40°	2762.1	2728.5	2521.2	2358.7	2269.1
42.5°	2588.4	2543.6	2341.9	2168.2	2067.4
45°	2403.5	2353.1	2151.4	1972.1	1893.7
47.5°	2218.7	2173.8	1988.9	1804.1	1714.4
50°	2022.6	1983.3	1815.3	1630.4	1535.1
52.5°	1860.1	1798.5	1636.0	1451.1	1372.7
55°	1669.6	1619.2	1467.9	1294.2	1227.0
57.5°	1495.9	1445.5	1305.4	1142.9	1086.9
60°	1333.4	1260.6	1142.9	1002.9	958.1
62.5°	1154.1	1098.1	997.3	879.6	935.6
65°	991.7	935.6	846.0	862.8	717.1
67.5°	812.4	784.4	705.9	627.5	605.1
70°	661.1	627.5	599.5	515.4	493.0
72.5°	526.7	493.0	453.8	409.0	392.2
75°	397.8	369.8	347.4	330.6	364.2
77.5°	274.5	263.3	246.5	229.7	224.1
80°	179.3	173.7	168.1	162.5	156.9
82.5°	106.5	106.5	106.5	106.5	106.5
85°	56.0	61.6	67.2	72.8	78.4
87.5°	33.6	33.6	39.2	44.8	50.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)