

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: P563438

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563438
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7481.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

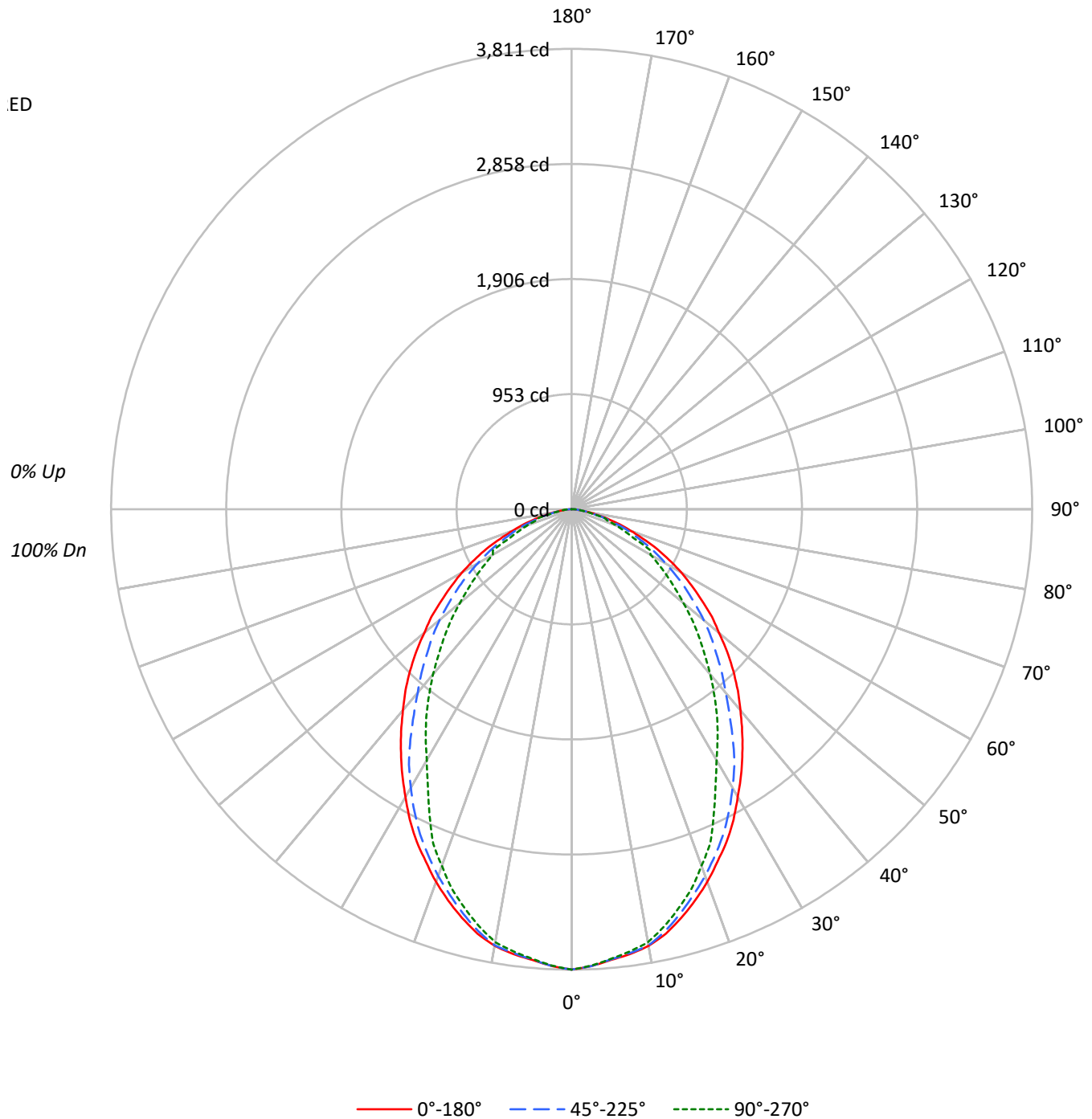
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5127	5127	5127
5°	5058	5052	5046
10°	5014	5008	4972
15°	4879	4830	4762
20°	4699	4624	4498
25°	4506	4408	4133
30°	4271	4134	3723
35°	4045	3821	3444
40°	3815	3482	3134
45°	3596	3219	2833
50°	3329	2988	2527
55°	3080	2708	2263
60°	2821	2418	2027
65°	2483	2118	1795
70°	2045	1854	1525
75°	1626	1420	1489
80°	1093	1024	956
85°	681	817	953

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3596 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	354.7	4.7
10°-20°	973.5	13.0
20°-30°	1347.8	18.0
30°-40°	1437.1	19.2
40°-50°	1311.1	17.5
50°-60°	1027.1	13.7
60°-70°	669.4	8.9
70°-80°	296.6	4.0
80°-90°	63.7	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°	2676.0	35.8
0°-40°	4113.1	55.0
0°-60°	6451.3	86.2
0°-90°	7481.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7481.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3811	3811	3811	3811	3811	
5°	3745	3740	3740	3736	3736	355
15°	3502	3502	3467	3432	3419	985
25°	3035	3018	2969	2864	2784	1394
35°	2463	2445	2326	2150	2097	1540
45°	1890	1850	1692	1551	1489	1456
55°	1313	1273	1154	1018	965	1178
65°	780	736	665	678	564	768
75°	313	291	273	260	286	335
85°	44	48	53	57	62	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3810.7	3810.7	3810.7	3810.7	3810.7
2.5°	3784.3	3784.3	3784.3	3779.9	3779.9
5°	3744.6	3740.2	3740.2	3735.8	3735.8
7.5°	3713.8	3709.4	3705.0	3700.6	3691.8
10°	3669.7	3669.7	3665.3	3643.3	3638.9
12.5°	3599.3	3594.9	3577.2	3546.4	3537.6
15°	3502.3	3502.3	3467.1	3431.9	3418.6
17.5°	3396.6	3392.2	3348.1	3312.9	3295.3
20°	3282.1	3273.3	3229.2	3171.9	3141.1
22.5°	3154.3	3154.3	3101.4	3026.5	2995.7
25°	3035.4	3017.7	2969.3	2863.5	2784.2
27.5°	2898.8	2872.4	2819.5	2669.7	2577.2
30°	2749.0	2735.8	2660.9	2467.1	2396.6
32.5°	2608.0	2586.0	2506.7	2304.1	2246.8
35°	2462.7	2445.0	2326.1	2149.9	2097.0
37.5°	2317.3	2295.2	2145.5	2004.5	1938.4
40°	2171.9	2145.5	1982.5	1854.7	1784.2
42.5°	2035.3	2000.1	1841.5	1704.9	1625.6
45°	1889.9	1850.3	1691.7	1550.7	1489.0
47.5°	1744.6	1709.3	1563.9	1418.6	1348.1
50°	1590.4	1559.5	1427.4	1282.0	1207.1
52.5°	1462.6	1414.2	1286.4	1141.0	1079.3
55°	1312.8	1273.2	1154.2	1017.7	964.8
57.5°	1176.3	1136.6	1026.5	898.7	854.7
60°	1048.5	991.2	898.7	788.6	753.3
62.5°	907.5	863.5	784.2	691.7	735.7
65°	779.8	735.7	665.2	678.4	563.9
67.5°	638.8	616.8	555.1	493.4	475.8
70°	519.8	493.4	471.4	405.3	387.7
72.5°	414.1	387.7	356.8	321.6	308.4
75°	312.8	290.8	273.1	259.9	286.4
77.5°	215.9	207.1	193.8	180.6	176.2
80°	141.0	136.6	132.2	127.8	123.4
82.5°	83.7	83.7	83.7	83.7	83.7
85°	44.1	48.5	52.9	57.3	61.7
87.5°	26.4	26.4	30.8	35.2	39.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)