

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: P563360

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563360
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-40-UNV-93-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7434.0 lumens
Efficiency: N/A
Efficacy: 105.9 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

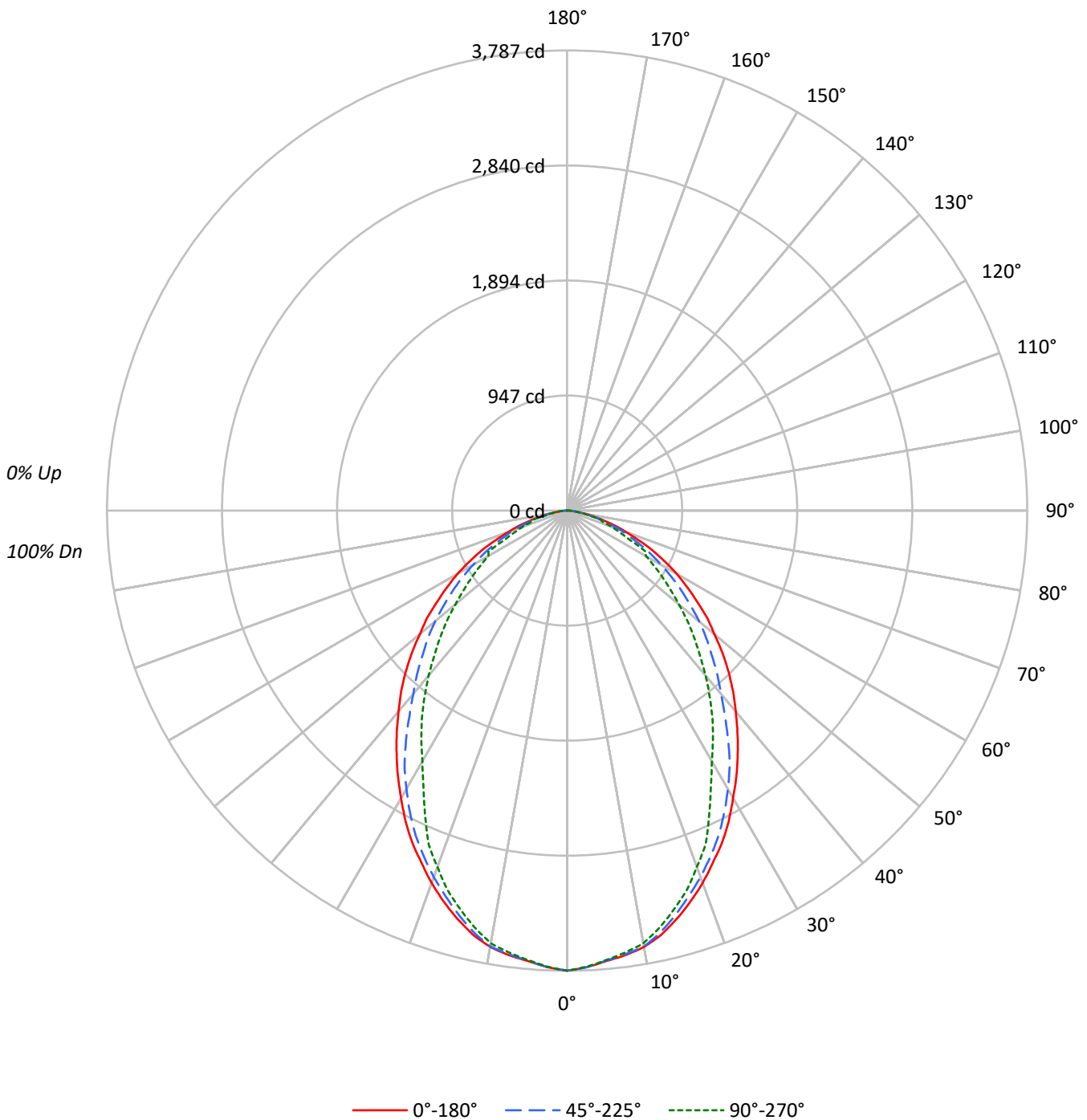
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5095	5095	5095
5°	5026	5020	5014
10°	4982	4976	4940
15°	4848	4799	4732
20°	4670	4595	4469
25°	4478	4380	4108
30°	4244	4108	3700
35°	4020	3797	3423
40°	3791	3460	3114
45°	3574	3199	2816
50°	3308	2969	2511
55°	3060	2691	2249
60°	2804	2403	2014
65°	2467	2104	1784
70°	2032	1843	1515
75°	1616	1411	1480
80°	1086	1017	950
85°	676	810	946

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3574 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.5	4.7
10°-20°	967.4	13.0
20°-30°	1339.3	18.0
30°-40°	1428.1	19.2
40°-50°	1302.8	17.5
50°-60°	1020.7	13.7
60°-70°	665.2	8.9
70°-80°	294.7	4.0
80°-90°	63.3	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°	2659.2	35.8
0°-40°	4087.3	55.0
0°-60°	6410.8	86.2
0°-90°	7434.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7434.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3787	3787	3787	3787	3787	
5°	3721	3717	3717	3712	3712	353
15°	3480	3480	3445	3410	3397	978
25°	3016	2999	2951	2846	2767	1385
35°	2447	2430	2312	2136	2084	1530
45°	1878	1839	1681	1541	1480	1447
55°	1305	1265	1147	1011	959	1170
65°	775	731	661	674	560	764
75°	311	289	271	258	285	333
85°	44	48	52	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3786.8	3786.8	3786.8	3786.8	3786.8
2.5°	3760.5	3760.5	3760.5	3756.1	3756.1
5°	3721.1	3716.7	3716.7	3712.4	3712.4
7.5°	3690.5	3686.1	3681.7	3677.3	3668.6
10°	3646.7	3646.7	3642.3	3620.4	3616.0
12.5°	3576.6	3572.3	3554.8	3524.1	3515.4
15°	3480.3	3480.3	3445.3	3410.3	3397.2
17.5°	3375.3	3370.9	3327.1	3292.1	3274.6
20°	3261.4	3252.7	3208.9	3152.0	3121.4
22.5°	3134.5	3134.5	3082.0	3007.5	2976.9
25°	3016.3	2998.8	2950.6	2845.6	2766.8
27.5°	2880.6	2854.3	2801.8	2652.9	2561.0
30°	2731.7	2718.6	2644.2	2451.6	2381.5
32.5°	2591.6	2569.8	2491.0	2289.6	2232.7
35°	2447.2	2429.7	2311.5	2136.4	2083.8
37.5°	2302.7	2280.8	2132.0	1991.9	1926.2
40°	2158.2	2132.0	1970.0	1843.0	1773.0
42.5°	2022.5	1987.5	1829.9	1694.2	1615.4
45°	1878.1	1838.7	1681.1	1541.0	1479.7
47.5°	1733.6	1698.6	1554.1	1409.6	1339.6
50°	1580.4	1549.7	1418.4	1273.9	1199.5
52.5°	1453.4	1405.3	1278.3	1133.8	1072.6
55°	1304.6	1265.2	1147.0	1011.3	958.7
57.5°	1168.9	1129.5	1020.0	893.1	849.3
60°	1041.9	985.0	893.1	783.6	748.6
62.5°	901.8	858.0	779.2	687.3	731.1
65°	774.9	731.1	661.0	674.2	560.4
67.5°	634.8	612.9	551.6	490.3	472.8
70°	516.6	490.3	468.4	402.8	385.2
72.5°	411.5	385.2	354.6	319.6	306.4
75°	310.8	288.9	271.4	258.3	284.6
77.5°	214.5	205.8	192.6	179.5	175.1
80°	140.1	135.7	131.3	127.0	122.6
82.5°	83.2	83.2	83.2	83.2	83.2
85°	43.8	48.2	52.5	56.9	61.3
87.5°	26.3	26.3	30.6	35.0	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)