

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: P562863

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562863
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-LD4-2LO-50-UNV-93-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5732.0 lumens
Efficiency: N/A
Efficacy: 122.5 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

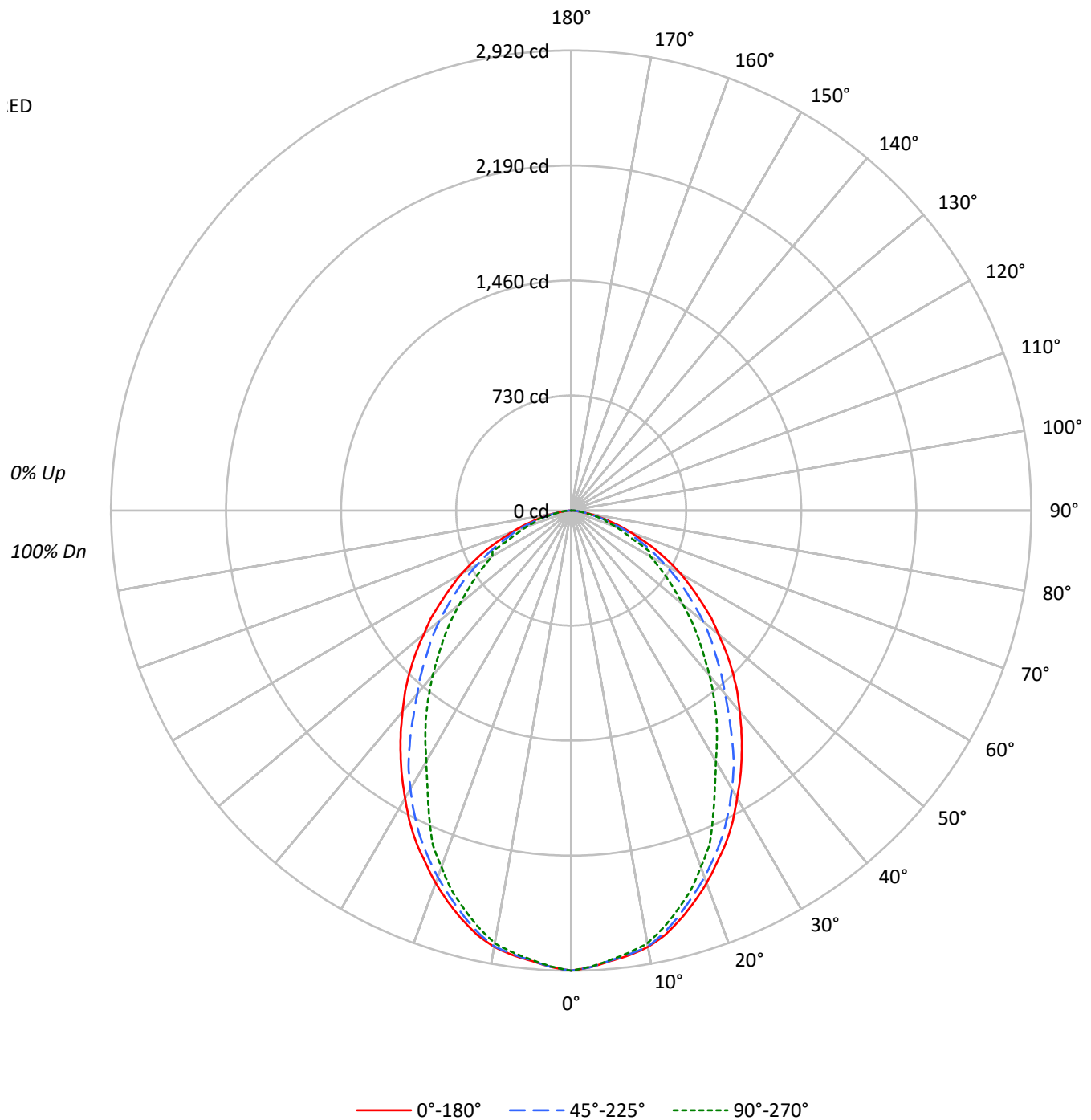
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3929	3929	3929
5°	3875	3871	3866
10°	3842	3837	3809
15°	3738	3700	3649
20°	3601	3543	3446
25°	3453	3378	3167
30°	3272	3168	2853
35°	3099	2927	2639
40°	2923	2668	2401
45°	2755	2466	2171
50°	2551	2289	1936
55°	2360	2075	1734
60°	2162	1853	1553
65°	1902	1623	1376
70°	1567	1421	1168
75°	1246	1088	1141
80°	837	785	732
85°	522	625	730

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2755 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.8	4.7
10°-20°	745.9	13.0
20°-30°	1032.7	18.0
30°-40°	1101.1	19.2
40°-50°	1004.6	17.5
50°-60°	787.0	13.7
60°-70°	512.9	8.9
70°-80°	227.2	4.0
80°-90°	48.8	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°	2050.4	35.8
0°-40°	3151.5	55.0
0°-60°	4943.1	86.2
0°-90°	5732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2920	2920	2920	2920	2920	
5°	2869	2866	2866	2862	2862	272
15°	2684	2684	2656	2630	2619	754
25°	2326	2312	2275	2194	2133	1068
35°	1887	1873	1782	1647	1607	1180
45°	1448	1418	1296	1188	1141	1115
55°	1006	976	884	780	739	902
65°	598	564	510	520	432	589
75°	240	223	209	199	219	257
85°	34	37	40	44	47	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2919.8	2919.8	2919.8	2919.8	2919.8
2.5°	2899.6	2899.6	2899.6	2896.2	2896.2
5°	2869.2	2865.8	2865.8	2862.4	2862.4
7.5°	2845.5	2842.2	2838.8	2835.4	2828.7
10°	2811.8	2811.8	2808.4	2791.5	2788.2
12.5°	2757.8	2754.4	2740.9	2717.3	2710.5
15°	2683.5	2683.5	2656.5	2629.5	2619.4
17.5°	2602.5	2599.1	2565.4	2538.4	2524.9
20°	2514.7	2508.0	2474.2	2430.4	2406.7
22.5°	2416.9	2416.9	2376.3	2319.0	2295.3
25°	2325.7	2312.2	2275.1	2194.1	2133.3
27.5°	2221.1	2200.8	2160.3	2045.6	1974.7
30°	2106.3	2096.2	2038.8	1890.3	1836.3
32.5°	1998.3	1981.4	1920.7	1765.4	1721.5
35°	1886.9	1873.4	1782.3	1647.2	1606.7
37.5°	1775.5	1758.6	1643.9	1535.9	1485.2
40°	1664.1	1643.9	1519.0	1421.1	1367.1
42.5°	1559.5	1532.5	1411.0	1306.3	1245.6
45°	1448.1	1417.7	1296.2	1188.2	1140.9
47.5°	1336.7	1309.7	1198.3	1086.9	1032.9
50°	1218.6	1194.9	1093.7	982.3	924.9
52.5°	1120.7	1083.5	985.6	874.3	827.0
55°	1005.9	975.5	884.4	779.7	739.2
57.5°	901.3	870.9	786.5	688.6	654.8
60°	803.4	759.5	688.6	604.2	577.2
62.5°	695.4	661.6	600.8	530.0	563.7
65°	597.5	563.7	509.7	519.8	432.1
67.5°	489.4	472.6	425.3	378.1	364.6
70°	398.3	378.1	361.2	310.5	297.0
72.5°	317.3	297.0	273.4	246.4	236.3
75°	239.7	222.8	209.3	199.2	219.4
77.5°	165.4	158.6	148.5	138.4	135.0
80°	108.0	104.6	101.3	97.9	94.5
82.5°	64.1	64.1	64.1	64.1	64.1
85°	33.8	37.1	40.5	43.9	47.3
87.5°	20.3	20.3	23.6	27.0	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)