

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: P562854

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562854
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-93-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4893.0 lumens
Efficiency: N/A
Efficacy: 104.6 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

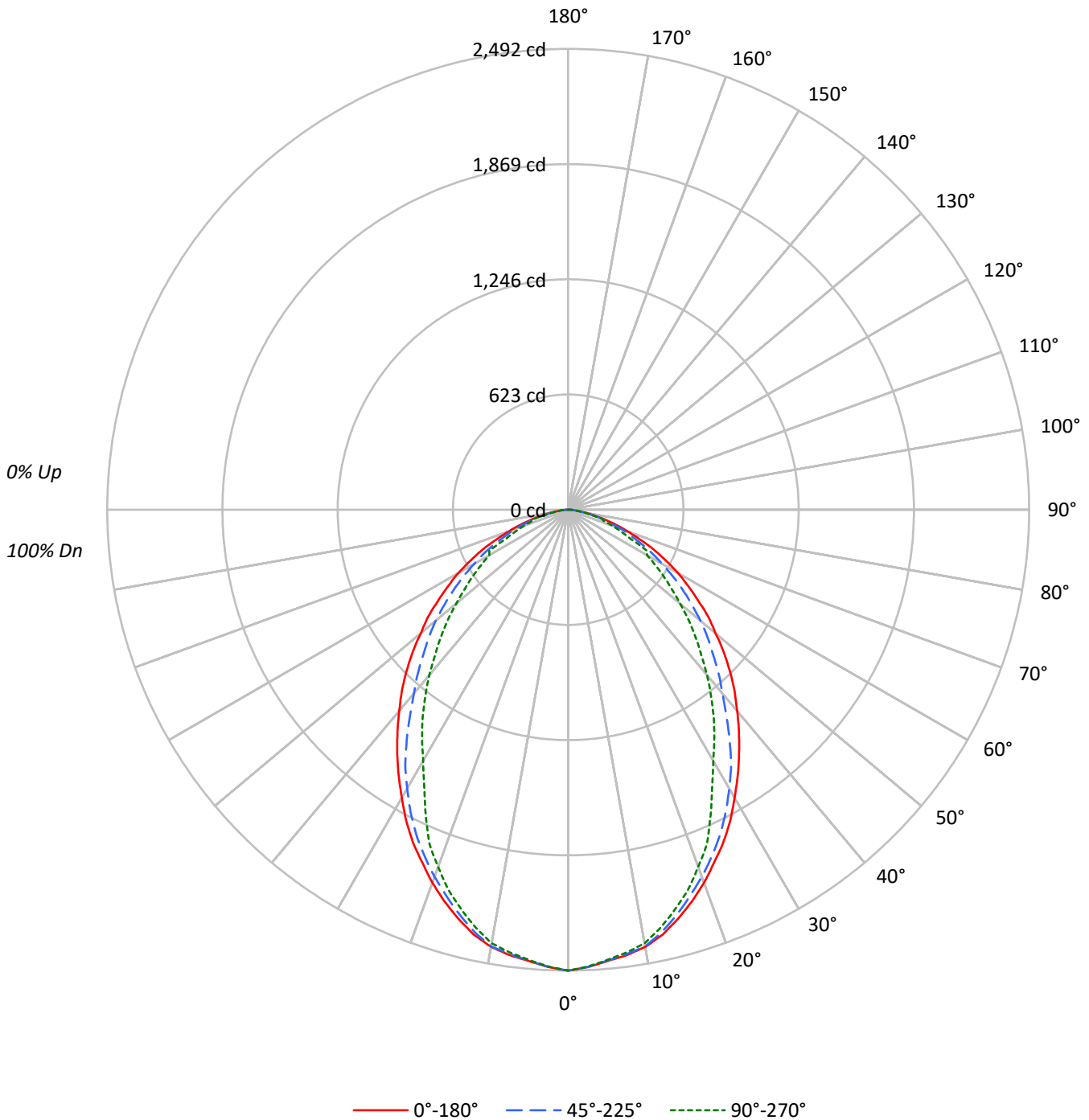
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3353	3353	3353
5°	3308	3304	3300
10°	3279	3275	3252
15°	3191	3159	3115
20°	3074	3024	2942
25°	2947	2883	2704
30°	2793	2704	2435
35°	2646	2499	2253
40°	2495	2277	2050
45°	2352	2105	1853
50°	2177	1954	1653
55°	2014	1771	1480
60°	1845	1582	1326
65°	1624	1385	1174
70°	1338	1213	998
75°	1064	928	974
80°	714	669	625
85°	445	534	622

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2352 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.0	4.7
10°-20°	636.7	13.0
20°-30°	881.5	18.0
30°-40°	940.0	19.2
40°-50°	857.5	17.5
50°-60°	671.8	13.7
60°-70°	437.8	8.9
70°-80°	194.0	4.0
80°-90°	41.6	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°	1750.3	35.8
0°-40°	2690.2	55.0
0°-60°	4219.5	86.2
0°-90°	4893.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4893.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2492	2492	2492	2492	2492	
5°	2449	2446	2446	2443	2443	232
15°	2291	2291	2268	2245	2236	644
25°	1985	1974	1942	1873	1821	911
35°	1611	1599	1521	1406	1372	1007
45°	1236	1210	1106	1014	974	952
55°	859	833	755	666	631	770
65°	510	481	435	444	369	503
75°	205	190	179	170	187	219
85°	29	32	35	38	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2492.4	2492.4	2492.4	2492.4	2492.4
2.5°	2475.1	2475.1	2475.1	2472.3	2472.3
5°	2449.2	2446.3	2446.3	2443.4	2443.4
7.5°	2429.0	2426.2	2423.3	2420.4	2414.6
10°	2400.2	2400.2	2397.3	2382.9	2380.1
12.5°	2354.1	2351.2	2339.7	2319.5	2313.8
15°	2290.7	2290.7	2267.7	2244.6	2236.0
17.5°	2221.6	2218.7	2189.9	2166.8	2155.3
20°	2146.7	2140.9	2112.1	2074.6	2054.5
22.5°	2063.1	2063.1	2028.5	1979.5	1959.4
25°	1985.3	1973.8	1942.1	1872.9	1821.1
27.5°	1896.0	1878.7	1844.1	1746.1	1685.6
30°	1798.0	1789.4	1740.4	1613.6	1567.5
32.5°	1705.8	1691.4	1639.5	1507.0	1469.5
35°	1610.7	1599.2	1521.4	1406.1	1371.6
37.5°	1515.6	1501.2	1403.3	1311.0	1267.8
40°	1420.5	1403.3	1296.6	1213.1	1167.0
42.5°	1331.2	1308.2	1204.4	1115.1	1063.2
45°	1236.1	1210.2	1106.5	1014.3	973.9
47.5°	1141.0	1118.0	1022.9	927.8	881.7
50°	1040.2	1020.0	933.6	838.5	789.5
52.5°	956.6	924.9	841.4	746.3	705.9
55°	858.7	832.7	754.9	665.6	631.0
57.5°	769.3	743.4	671.4	587.8	559.0
60°	685.8	648.3	587.8	515.8	492.7
62.5°	593.6	564.8	512.9	452.4	481.2
65°	510.0	481.2	435.1	443.7	368.8
67.5°	417.8	403.4	363.1	322.7	311.2
70°	340.0	322.7	308.3	265.1	253.6
72.5°	270.9	253.6	233.4	210.3	201.7
75°	204.6	190.2	178.6	170.0	187.3
77.5°	141.2	135.4	126.8	118.1	115.3
80°	92.2	89.3	86.4	83.6	80.7
82.5°	54.7	54.7	54.7	54.7	54.7
85°	28.8	31.7	34.6	37.5	40.3
87.5°	17.3	17.3	20.2	23.1	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)