

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: P590832

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590832
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4LO-35-UNV-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5476.0 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

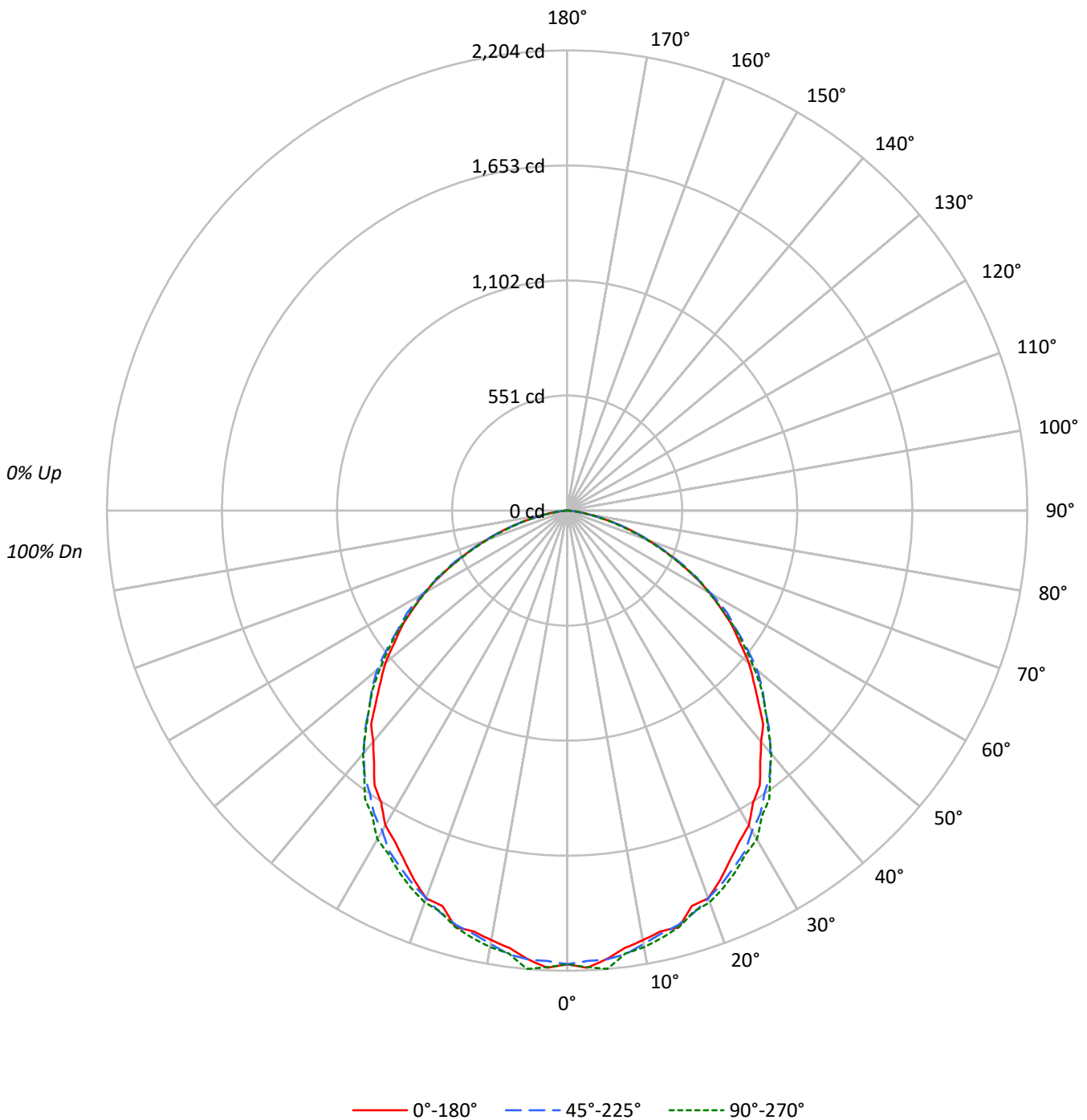
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5847	5847	5847
5°	5827	5830	5952
10°	5709	5759	5800
15°	5755	5723	5755
20°	5657	5657	5718
25°	5483	5603	5665
30°	5408	5503	5649
35°	5281	5419	5541
40°	5075	5319	5343
45°	4922	5097	5104
50°	4760	4975	4880
55°	4535	4624	4591
60°	4241	4283	4207
65°	3782	3878	3755
70°	3245	3256	3165
75°	2570	2564	2465
80°	1722	1674	1609
85°	936	926	868

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5228 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.4	3.7
10°-20°	579.2	10.6
20°-30°	867.8	15.8
30°-40°	1028.5	18.8
40°-50°	1030.4	18.8
50°-60°	874.7	16.0
60°-70°	589.7	10.8
70°-80°	259.1	4.7
80°-90°	42.1	0.8
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°	1651.4	30.2
0°-40°	2680.0	48.9
0°-60°	4585.1	83.7
0°-90°	5476.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5476.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2173	2173	2173	2173	2173	
5°	2157	2152	2158	2152	2204	203
15°	2066	2042	2054	2065	2066	575
25°	1847	1857	1887	1912	1908	854
35°	1608	1612	1650	1688	1687	998
45°	1293	1317	1339	1374	1341	1000
55°	967	960	986	979	978	860
65°	594	586	609	586	590	591
75°	247	242	247	229	237	265
85°	30	30	30	29	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2172.7	2172.7	2172.7	2172.7	2172.7
2.5°	2191.5	2175.0	2159.6	2177.5	2188.4
5°	2157.3	2152.3	2158.2	2151.7	2203.6
7.5°	2113.0	2132.3	2143.6	2136.5	2139.6
10°	2089.4	2082.7	2107.7	2125.0	2122.5
12.5°	2064.2	2074.3	2075.7	2094.5	2096.2
15°	2065.6	2041.7	2054.4	2065.0	2065.9
17.5°	1985.3	2011.2	2019.8	2044.3	2014.0
20°	1975.5	1956.7	1975.5	2000.5	1996.6
22.5°	1915.2	1894.2	1934.6	1956.7	1955.3
25°	1846.8	1856.9	1887.2	1911.8	1907.9
27.5°	1786.7	1798.5	1841.7	1875.7	1853.8
30°	1740.4	1734.5	1771.0	1801.3	1818.1
32.5°	1657.7	1679.0	1721.6	1751.7	1735.7
35°	1607.5	1612.2	1649.5	1687.7	1686.6
37.5°	1519.7	1541.8	1594.3	1604.9	1595.1
40°	1444.8	1466.9	1514.3	1525.8	1521.1
42.5°	1389.5	1393.4	1434.1	1447.3	1426.2
45°	1293.3	1317.4	1339.3	1373.8	1341.2
47.5°	1211.3	1222.6	1269.7	1279.0	1261.8
50°	1137.0	1140.9	1188.3	1176.8	1165.6
52.5°	1043.6	1060.1	1086.8	1084.5	1071.4
55°	966.7	960.3	985.5	978.8	978.5
57.5°	874.4	885.6	906.4	895.7	878.6
60°	788.0	788.3	795.9	783.8	781.6
62.5°	691.8	695.2	696.8	682.0	706.1
65°	593.9	586.0	609.0	585.8	589.7
67.5°	503.8	507.8	505.5	490.9	496.5
70°	412.4	417.4	413.8	397.2	402.3
72.5°	328.8	322.6	326.5	305.8	315.3
75°	247.2	242.1	246.6	229.2	237.1
77.5°	168.3	172.2	169.4	160.2	165.5
80°	111.1	108.0	108.0	102.7	103.8
82.5°	64.8	61.7	60.9	59.2	61.7
85°	30.3	29.5	30.0	29.2	28.1
87.5°	10.9	11.2	11.2	10.7	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)