

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: P590660

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-81-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590660
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-LD4-3STD-40-UNV-81-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5368.0 lumens
Efficiency: N/A
Efficacy: 107.4 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

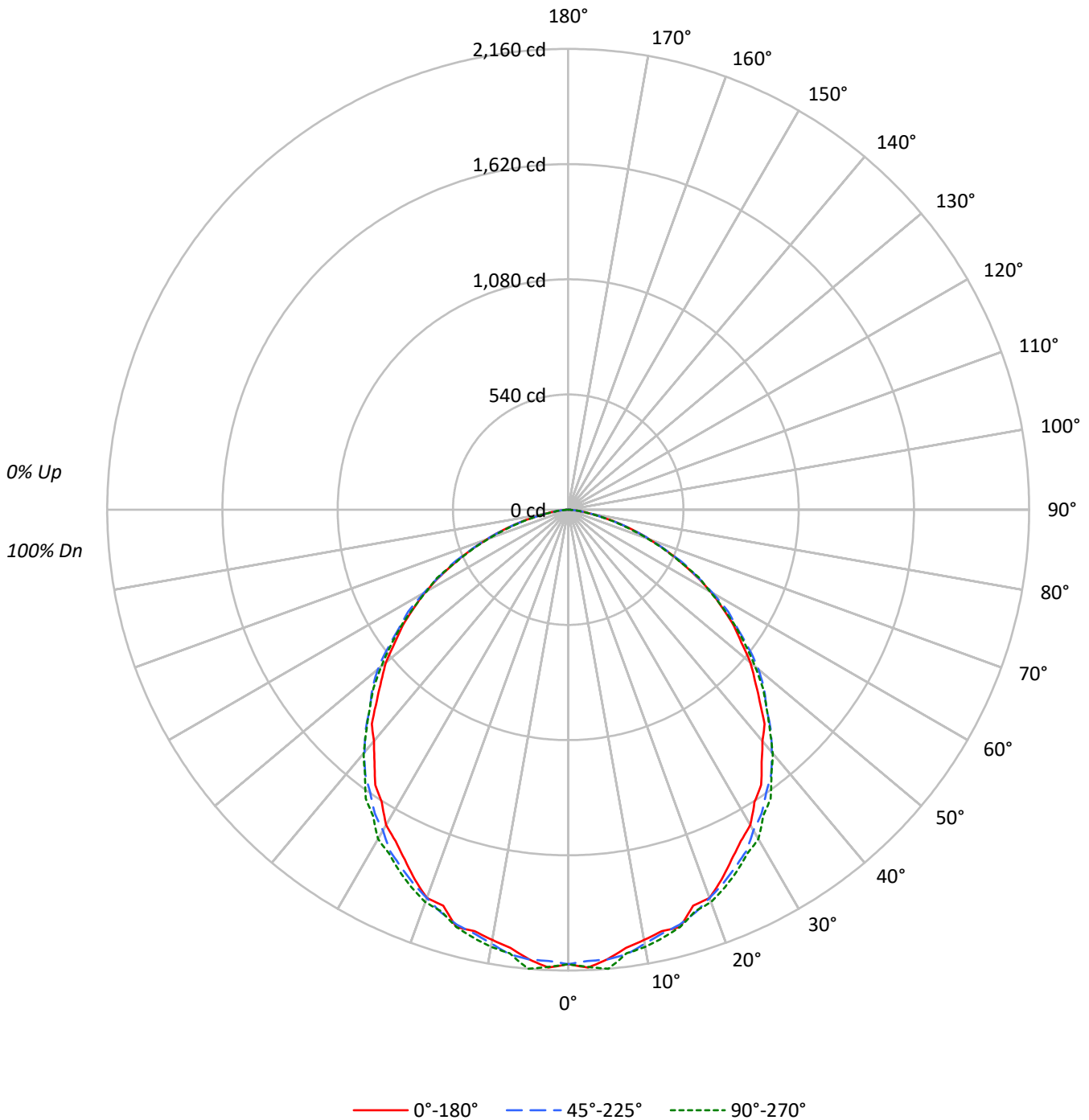
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5732	5732	5732
5°	5713	5715	5835
10°	5597	5646	5685
15°	5641	5610	5642
20°	5546	5546	5605
25°	5375	5493	5553
30°	5301	5395	5538
35°	5177	5312	5431
40°	4975	5215	5238
45°	4825	4996	5004
50°	4666	4877	4783
55°	4446	4533	4500
60°	4158	4199	4124
65°	3707	3801	3681
70°	3181	3191	3103
75°	2519	2513	2416
80°	1688	1641	1578
85°	917	908	849

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5125 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.3	3.7
10°-20°	567.8	10.6
20°-30°	850.7	15.8
30°-40°	1008.2	18.8
40°-50°	1010.1	18.8
50°-60°	857.4	16.0
60°-70°	578.1	10.8
70°-80°	254.0	4.7
80°-90°	41.3	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°	1618.9	30.2
0°-40°	2627.1	48.9
0°-60°	4494.7	83.7
0°-90°	5368.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5368.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2130	2130	2130	2130	2130	
5°	2115	2110	2116	2109	2160	199
15°	2025	2002	2014	2024	2025	564
25°	1810	1820	1850	1874	1870	837
35°	1576	1580	1617	1654	1653	978
45°	1268	1291	1313	1347	1315	981
55°	948	941	966	960	959	843
65°	582	574	597	574	578	579
75°	242	237	242	225	232	260
85°	30	29	29	29	28	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2129.9	2129.9	2129.9	2129.9	2129.9
2.5°	2148.3	2132.1	2117.0	2134.6	2145.3
5°	2114.8	2109.8	2115.6	2109.3	2160.1
7.5°	2071.3	2090.3	2101.3	2094.4	2097.4
10°	2048.2	2041.6	2066.1	2083.1	2080.7
12.5°	2023.5	2033.4	2034.7	2053.2	2054.8
15°	2024.8	2001.5	2013.8	2024.3	2025.1
17.5°	1946.2	1971.5	1980.0	2003.9	1974.2
20°	1936.6	1918.1	1936.6	1961.0	1957.2
22.5°	1877.4	1856.8	1896.4	1918.1	1916.8
25°	1810.3	1820.2	1849.9	1874.1	1870.3
27.5°	1751.5	1763.0	1805.4	1838.7	1817.2
30°	1706.1	1700.3	1736.1	1765.8	1782.3
32.5°	1625.0	1645.9	1687.7	1717.1	1701.4
35°	1575.8	1580.4	1617.0	1654.4	1653.3
37.5°	1489.7	1511.4	1562.8	1573.3	1563.7
40°	1416.3	1438.0	1484.5	1495.7	1491.1
42.5°	1362.1	1365.9	1405.8	1418.7	1398.1
45°	1267.8	1291.4	1312.9	1346.7	1314.8
47.5°	1187.5	1198.5	1244.7	1253.7	1237.0
50°	1114.6	1118.4	1164.9	1153.6	1142.6
52.5°	1023.0	1039.2	1065.4	1063.2	1050.2
55°	947.7	941.3	966.1	959.5	959.2
57.5°	857.2	868.2	888.5	878.1	861.3
60°	772.5	772.8	780.2	768.4	766.2
62.5°	678.2	681.5	683.1	668.5	692.2
65°	582.2	574.5	597.0	574.2	578.1
67.5°	493.9	497.8	495.6	481.3	486.8
70°	404.3	409.2	405.6	389.4	394.4
72.5°	322.3	316.3	320.1	299.8	309.1
75°	242.3	237.3	241.7	224.7	232.4
77.5°	165.0	168.9	166.1	157.0	162.3
80°	108.9	105.9	105.9	100.7	101.8
82.5°	63.5	60.5	59.7	58.0	60.5
85°	29.7	28.9	29.4	28.6	27.5
87.5°	10.7	11.0	11.0	10.5	9.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)