

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: P590468

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590468
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-LD4-3HI-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: 6584.0 lumens
Efficiency: N/A
Efficacy: 101.6 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

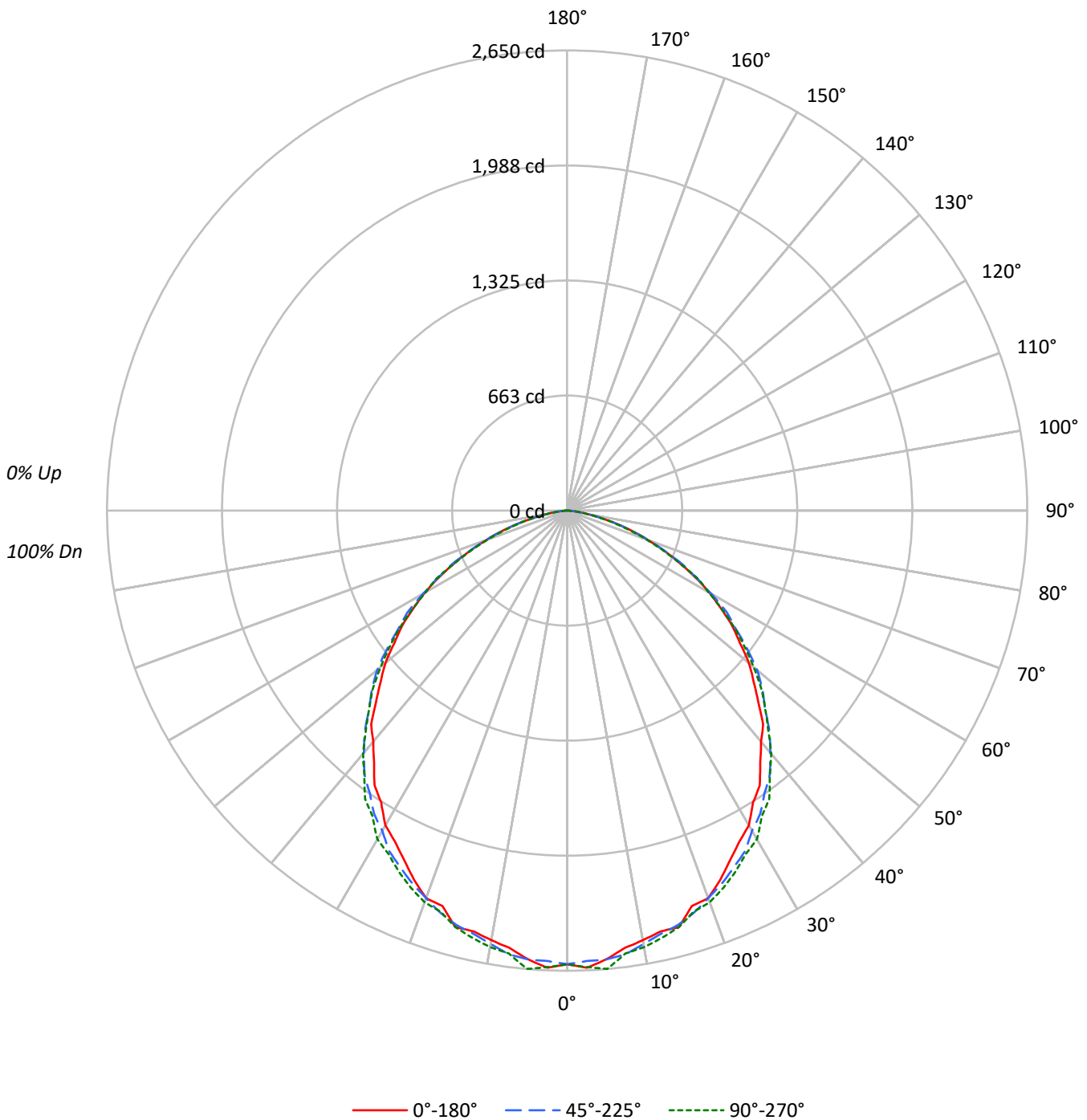
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7030	7030	7030
5°	7007	7009	7157
10°	6865	6924	6973
15°	6919	6881	6920
20°	6802	6802	6874
25°	6593	6737	6811
30°	6502	6617	6793
35°	6349	6515	6661
40°	6102	6396	6424
45°	5917	6128	6137
50°	5723	5982	5867
55°	5453	5559	5520
60°	5099	5150	5057
65°	4547	4663	4514
70°	3901	3914	3806
75°	3090	3083	2963
80°	2070	2013	1934
85°	1124	1115	1041

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6286 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	245.7	3.7
10°-20°	696.4	10.6
20°-30°	1043.4	15.8
30°-40°	1236.6	18.8
40°-50°	1238.9	18.8
50°-60°	1051.6	16.0
60°-70°	709.0	10.8
70°-80°	311.6	4.7
80°-90°	50.6	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°	1985.6	30.2
0°-40°	3222.2	48.9
0°-60°	5512.8	83.7
0°-90°	6584.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6584.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2612	2612	2612	2612	2612	
5°	2594	2588	2595	2587	2650	245
15°	2484	2455	2470	2483	2484	692
25°	2220	2233	2269	2299	2294	1027
35°	1933	1938	1983	2029	2028	1200
45°	1555	1584	1610	1652	1613	1203
55°	1162	1155	1185	1177	1176	1034
65°	714	705	732	704	709	710
75°	297	291	296	276	285	318
85°	36	35	36	35	34	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2612.4	2612.4	2612.4	2612.4	2612.4
2.5°	2635.0	2615.1	2596.5	2618.1	2631.3
5°	2593.8	2587.7	2594.8	2587.1	2649.5
7.5°	2540.5	2563.8	2577.3	2568.9	2572.6
10°	2512.2	2504.1	2534.1	2555.0	2552.0
12.5°	2481.8	2494.0	2495.7	2518.3	2520.3
15°	2483.5	2454.8	2470.0	2482.8	2483.9
17.5°	2387.1	2418.1	2428.5	2457.9	2421.5
20°	2375.2	2352.6	2375.2	2405.3	2400.5
22.5°	2302.7	2277.4	2326.0	2352.6	2351.0
25°	2220.4	2232.6	2269.0	2298.7	2294.0
27.5°	2148.2	2162.4	2214.4	2255.2	2228.9
30°	2092.6	2085.5	2129.4	2165.8	2186.0
32.5°	1993.1	2018.7	2070.0	2106.1	2086.9
35°	1932.7	1938.4	1983.3	2029.2	2027.8
37.5°	1827.1	1853.8	1916.9	1929.7	1917.9
40°	1737.1	1763.7	1820.7	1834.6	1828.8
42.5°	1670.6	1675.4	1724.3	1740.1	1714.8
45°	1554.9	1583.9	1610.3	1651.7	1612.6
47.5°	1456.4	1469.9	1526.6	1537.7	1517.2
50°	1367.1	1371.8	1428.8	1415.0	1401.5
52.5°	1254.7	1274.6	1306.7	1304.0	1288.1
55°	1162.3	1154.6	1184.9	1176.8	1176.5
57.5°	1051.4	1064.8	1089.8	1077.0	1056.4
60°	947.5	947.8	956.9	942.4	939.7
62.5°	831.8	835.8	837.8	820.0	849.0
65°	714.1	704.6	732.3	704.3	709.0
67.5°	605.8	610.5	607.8	590.3	597.0
70°	495.8	501.9	497.5	477.6	483.7
72.5°	395.3	387.9	392.6	367.7	379.1
75°	297.2	291.1	296.5	275.6	285.0
77.5°	202.4	207.1	203.7	192.6	199.0
80°	133.6	129.9	129.9	123.5	124.8
82.5°	77.9	74.2	73.2	71.2	74.2
85°	36.4	35.4	36.1	35.1	33.7
87.5°	13.2	13.5	13.5	12.8	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)