

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: P590449

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590449
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-35-UNV-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6075.0 lumens
Efficiency: N/A
Efficacy: 93.8 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

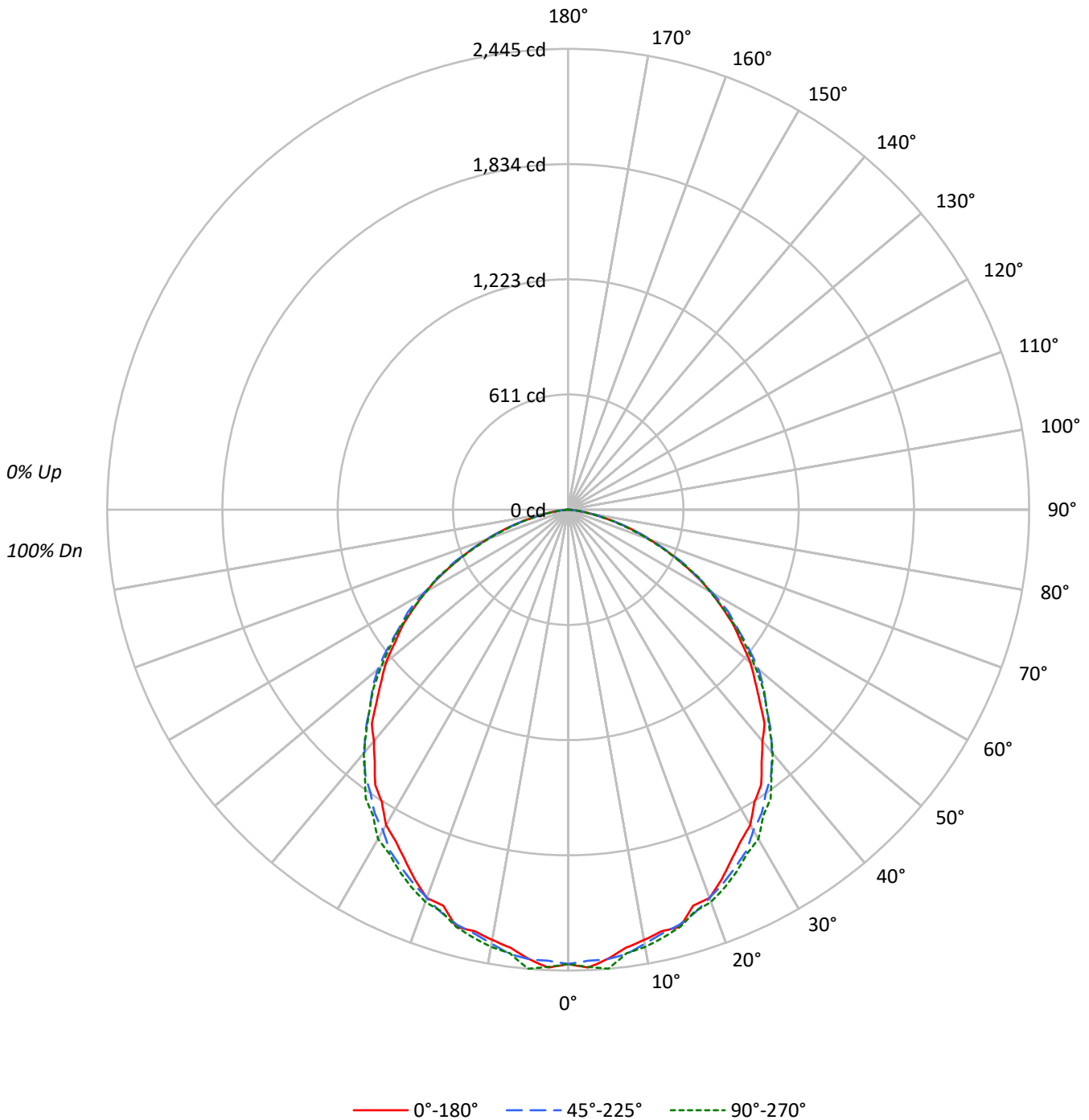
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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																												
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6486	6486	6486
5°	6465	6467	6603
10°	6334	6389	6434
15°	6384	6349	6385
20°	6276	6276	6343
25°	6083	6216	6285
30°	6000	6105	6267
35°	5858	6012	6147
40°	5630	5902	5928
45°	5460	5654	5662
50°	5281	5519	5413
55°	5032	5129	5093
60°	4705	4752	4667
65°	4195	4302	4166
70°	3600	3612	3511
75°	2851	2845	2734
80°	1909	1857	1785
85°	1037	1028	960

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5800 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.7	3.7
10°-20°	642.6	10.6
20°-30°	962.7	15.8
30°-40°	1141.0	18.8
40°-50°	1143.2	18.8
50°-60°	970.3	16.0
60°-70°	654.2	10.8
70°-80°	287.5	4.7
80°-90°	46.7	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°	1832.1	30.2
0°-40°	2973.1	48.9
0°-60°	5086.6	83.7
0°-90°	6075.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6075.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2410	2410	2410	2410	2410	
5°	2393	2388	2394	2387	2445	226
15°	2292	2265	2279	2291	2292	638
25°	2049	2060	2094	2121	2117	947
35°	1783	1789	1830	1872	1871	1107
45°	1435	1462	1486	1524	1488	1110
55°	1072	1065	1093	1086	1086	954
65°	659	650	676	650	654	655
75°	274	269	274	254	263	294
85°	34	33	33	32	31	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2410.4	2410.4	2410.4	2410.4	2410.4
2.5°	2431.3	2412.9	2395.8	2415.7	2427.8
5°	2393.3	2387.7	2394.2	2387.1	2444.6
7.5°	2344.1	2365.6	2378.0	2370.3	2373.7
10°	2318.0	2310.5	2338.2	2357.5	2354.7
12.5°	2290.0	2301.2	2302.7	2323.6	2325.4
15°	2291.5	2265.1	2279.1	2290.9	2291.8
17.5°	2202.5	2231.1	2240.8	2267.9	2234.3
20°	2191.6	2170.8	2191.6	2219.3	2215.0
22.5°	2124.7	2101.4	2146.2	2170.8	2169.2
25°	2048.8	2060.0	2093.6	2121.0	2116.6
27.5°	1982.2	1995.2	2043.2	2080.8	2056.5
30°	1930.8	1924.3	1964.7	1998.3	2017.0
32.5°	1839.0	1862.7	1910.0	1943.3	1925.5
35°	1783.3	1788.6	1830.0	1872.3	1871.1
37.5°	1685.9	1710.5	1768.7	1780.5	1769.6
40°	1602.8	1627.4	1680.0	1692.7	1687.4
42.5°	1541.5	1545.8	1591.0	1605.6	1582.2
45°	1434.7	1461.5	1485.8	1524.0	1487.9
47.5°	1343.9	1356.3	1408.6	1418.9	1399.9
50°	1261.4	1265.7	1318.3	1305.6	1293.1
52.5°	1157.7	1176.1	1205.7	1203.2	1188.6
55°	1072.5	1065.3	1093.3	1085.9	1085.5
57.5°	970.1	982.5	1005.6	993.7	974.7
60°	874.2	874.5	882.9	869.6	867.1
62.5°	767.5	771.2	773.1	756.6	783.3
65°	658.9	650.1	675.7	649.8	654.2
67.5°	559.0	563.3	560.8	544.6	550.9
70°	457.5	463.1	459.1	440.7	446.3
72.5°	364.8	357.9	362.3	339.2	349.8
75°	274.2	268.6	273.6	254.3	263.0
77.5°	186.7	191.1	188.0	177.7	183.6
80°	123.2	119.8	119.8	113.9	115.2
82.5°	71.9	68.5	67.5	65.7	68.5
85°	33.6	32.7	33.3	32.4	31.1
87.5°	12.1	12.4	12.4	11.8	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)