

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: P590453

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-80-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590453
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-80-84-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7252.0 lumens
Efficiency: N/A
Efficacy: 111.9 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

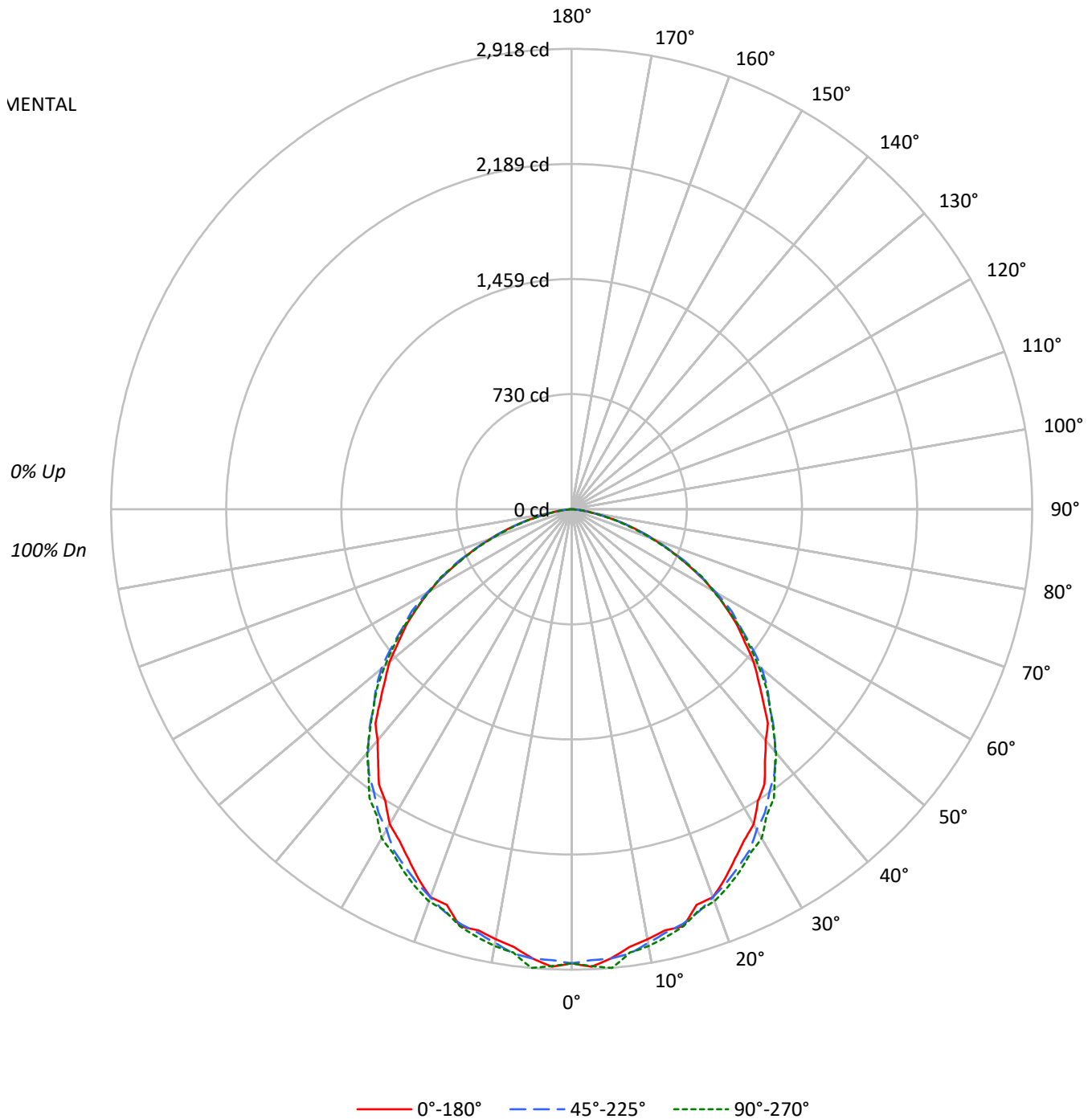
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7743	7743	7743
5°	7717	7720	7883
10°	7561	7627	7681
15°	7621	7579	7622
20°	7492	7492	7572
25°	7262	7421	7502
30°	7162	7288	7482
35°	6993	7176	7338
40°	6721	7045	7076
45°	6518	6750	6760
50°	6304	6589	6463
55°	6007	6123	6080
60°	5617	5673	5571
65°	5008	5136	4972
70°	4297	4312	4192
75°	3403	3396	3264
80°	2280	2216	2131
85°	1238	1229	1149

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6924 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	270.7	3.7
10°-20°	767.1	10.6
20°-30°	1149.3	15.8
30°-40°	1362.1	18.8
40°-50°	1364.6	18.8
50°-60°	1158.4	16.0
60°-70°	781.0	10.8
70°-80°	343.1	4.7
80°-90°	55.8	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°	2187.0	30.2
0°-40°	3549.1	48.9
0°-60°	6072.1	83.7
0°-90°	7252.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7252.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2877	2877	2877	2877	2877	
5°	2857	2850	2858	2850	2918	269
15°	2736	2704	2721	2735	2736	762
25°	2446	2459	2499	2532	2527	1131
35°	2129	2135	2184	2235	2234	1322
45°	1713	1745	1774	1819	1776	1325
55°	1280	1272	1305	1296	1296	1139
65°	786	776	807	776	781	782
75°	327	321	327	304	314	351
85°	40	39	40	39	37	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2877.4	2877.4	2877.4	2877.4	2877.4
2.5°	2902.3	2880.4	2859.9	2883.7	2898.2
5°	2857.0	2850.3	2858.1	2849.5	2918.3
7.5°	2798.3	2823.9	2838.8	2829.5	2833.6
10°	2767.1	2758.2	2791.2	2814.3	2810.9
12.5°	2733.6	2747.0	2748.9	2773.8	2776.0
15°	2735.5	2703.9	2720.6	2734.7	2735.9
17.5°	2629.2	2663.4	2674.9	2707.3	2667.1
20°	2616.2	2591.3	2616.2	2649.3	2644.1
22.5°	2536.4	2508.5	2562.0	2591.3	2589.5
25°	2445.7	2459.1	2499.2	2531.9	2526.7
27.5°	2366.2	2381.8	2439.0	2484.0	2455.0
30°	2304.9	2297.1	2345.4	2385.5	2407.8
32.5°	2195.3	2223.5	2280.0	2319.8	2298.6
35°	2128.8	2135.1	2184.5	2235.1	2233.6
37.5°	2012.5	2041.9	2111.3	2125.5	2112.5
40°	1913.3	1942.7	2005.5	2020.7	2014.4
42.5°	1840.1	1845.3	1899.2	1916.7	1888.8
45°	1712.7	1744.7	1773.6	1819.3	1776.2
47.5°	1604.2	1619.1	1681.5	1693.8	1671.1
50°	1505.8	1511.0	1573.8	1558.5	1543.7
52.5°	1382.0	1404.0	1439.3	1436.3	1418.8
55°	1280.3	1271.7	1305.1	1296.2	1295.9
57.5°	1158.0	1172.9	1200.4	1186.3	1163.6
60°	1043.6	1044.0	1054.0	1038.0	1035.1
62.5°	916.2	920.6	922.9	903.2	935.1
65°	786.5	776.1	806.6	775.7	780.9
67.5°	667.2	672.4	669.5	650.2	657.6
70°	546.1	552.8	548.0	526.1	532.8
72.5°	435.4	427.2	432.4	405.0	417.6
75°	327.3	320.6	326.6	303.5	313.9
77.5°	222.9	228.1	224.4	212.1	219.2
80°	147.1	143.0	143.0	136.0	137.5
82.5°	85.8	81.7	80.6	78.4	81.7
85°	40.1	39.0	39.8	38.6	37.2
87.5°	14.5	14.9	14.9	14.1	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)