

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: P590745

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590745
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-LD4-4HI-40-UNV-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

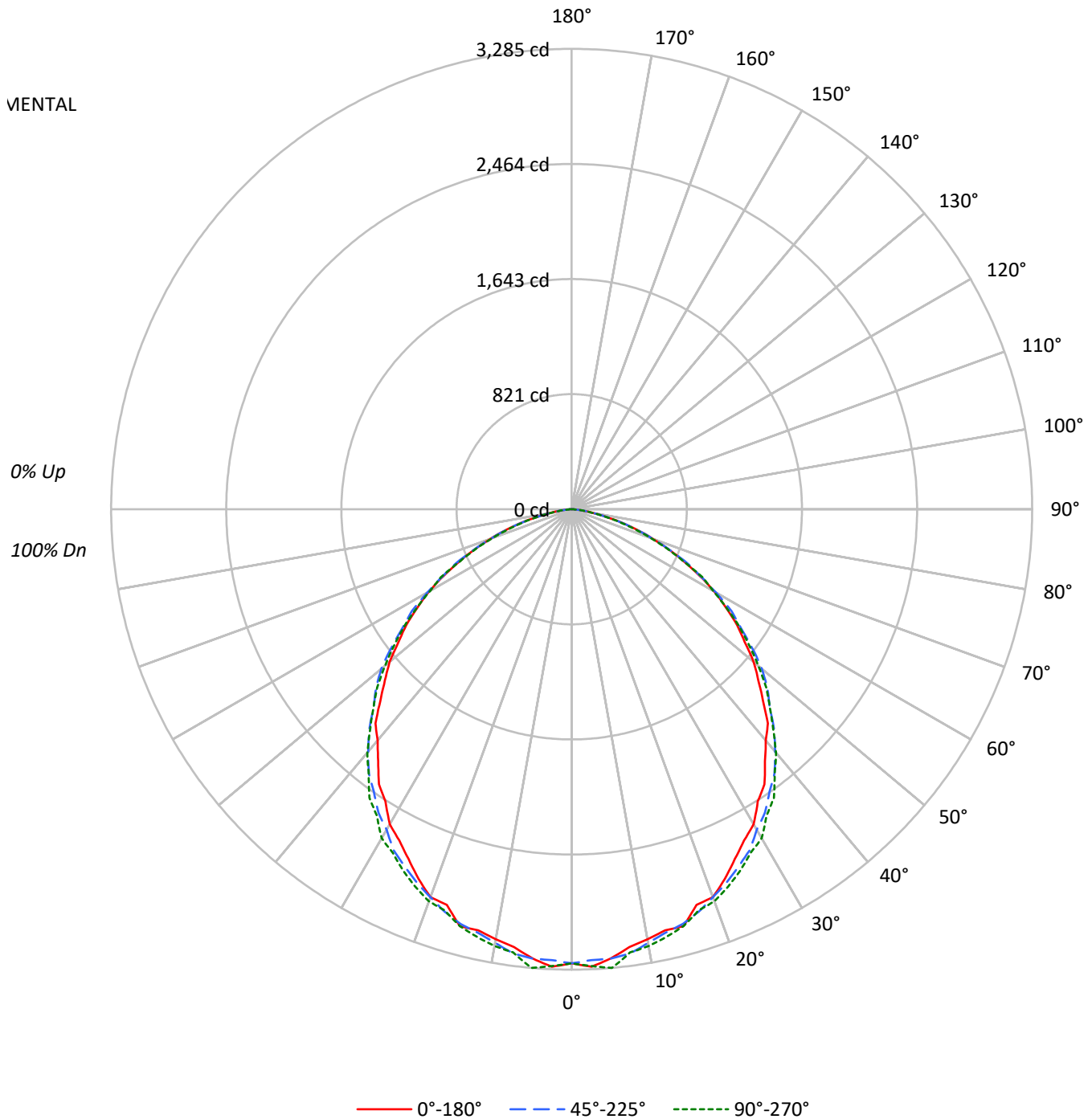
Lumens per Lamp: N/A
Luminaire Lumens: 8164.0 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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



TEST NUMBER: P590745
CATALOG NUMBER: FSR-24-2-LD4-4HI-40-UNV-80-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590745

CATALOG NUMBER: FSR-24-2-LD4-4HI-40-UNV-80-88-EDD

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				
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°	8717	8717	8717
5°	8688	8691	8874
10°	8512	8586	8647
15°	8579	8533	8580
20°	8434	8434	8524
25°	8175	8354	8446
30°	8063	8204	8423
35°	7873	8079	8260
40°	7566	7931	7966
45°	7338	7599	7610
50°	7096	7417	7275
55°	6762	6893	6844
60°	6323	6386	6271
65°	5638	5782	5598
70°	4837	4854	4719
75°	3831	3822	3674
80°	2566	2495	2397
85°	1396	1383	1291

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7794 cd/sqm



TEST NUMBER: P590745

CATALOG NUMBER: FSR-24-2-LD4-4HI-40-UNV-80-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.7	3.7
10°-20°	863.6	10.6
20°-30°	1293.8	15.8
30°-40°	1533.4	18.8
40°-50°	1536.3	18.8
50°-60°	1304.0	16.0
60°-70°	879.2	10.8
70°-80°	386.3	4.7
80°-90°	62.8	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°	2462.1	30.2
0°-40°	3995.5	48.9
0°-60°	6835.7	83.7
0°-90°	8164.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8164.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3239	3239	3239	3239	3239	
5°	3216	3209	3218	3208	3285	303
15°	3080	3044	3063	3079	3080	858
25°	2753	2768	2814	2850	2844	1273
35°	2396	2404	2459	2516	2514	1488
45°	1928	1964	1997	2048	2000	1491
55°	1441	1432	1469	1459	1459	1282
65°	885	874	908	873	879	881
75°	368	361	368	342	353	395
85°	45	44	45	44	42	65
90°	0	0	0	0	0	



TEST NUMBER: P590745

CATALOG NUMBER: FSR-24-2-LD4-4HI-40-UNV-80-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3239.3	3239.3	3239.3	3239.3	3239.3
2.5°	3267.3	3242.6	3219.6	3246.4	3262.7
5°	3216.3	3208.7	3217.5	3207.9	3285.3
7.5°	3150.2	3179.0	3195.8	3185.3	3189.9
10°	3115.1	3105.0	3142.2	3168.2	3164.4
12.5°	3077.4	3092.5	3094.6	3122.6	3125.1
15°	3079.5	3044.0	3062.8	3078.7	3079.9
17.5°	2959.9	2998.4	3011.3	3047.7	3002.5
20°	2945.2	2917.2	2945.2	2982.5	2976.6
22.5°	2855.3	2824.0	2884.2	2917.2	2915.1
25°	2753.3	2768.3	2813.5	2850.3	2844.5
27.5°	2663.8	2681.3	2745.7	2796.4	2763.7
30°	2594.8	2586.0	2640.3	2685.5	2710.6
32.5°	2471.4	2503.2	2566.7	2611.5	2587.7
35°	2396.5	2403.6	2459.3	2516.1	2514.5
37.5°	2265.6	2298.6	2376.9	2392.8	2378.1
40°	2153.9	2187.0	2257.7	2274.8	2267.7
42.5°	2071.5	2077.4	2138.0	2157.7	2126.3
45°	1928.1	1964.1	1996.7	2048.1	1999.6
47.5°	1806.0	1822.7	1893.0	1906.8	1881.2
50°	1695.1	1701.0	1771.7	1754.5	1737.8
52.5°	1555.9	1580.5	1620.3	1616.9	1597.3
55°	1441.3	1431.6	1469.3	1459.2	1458.8
57.5°	1303.7	1320.4	1351.3	1335.4	1309.9
60°	1174.8	1175.3	1186.5	1168.6	1165.2
62.5°	1031.4	1036.4	1038.9	1016.7	1052.7
65°	885.4	873.7	908.0	873.3	879.1
67.5°	751.2	757.0	753.7	731.9	740.3
70°	614.8	622.3	616.9	592.2	599.8
72.5°	490.2	481.0	486.8	455.9	470.1
75°	368.5	360.9	367.6	341.7	353.4
77.5°	250.9	256.8	252.6	238.8	246.8
80°	165.6	161.0	161.0	153.1	154.7
82.5°	96.6	92.0	90.8	88.2	92.0
85°	45.2	43.9	44.8	43.5	41.8
87.5°	16.3	16.7	16.7	15.9	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)