

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: P589919

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589919
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-LD4-1HI-50-UNV-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

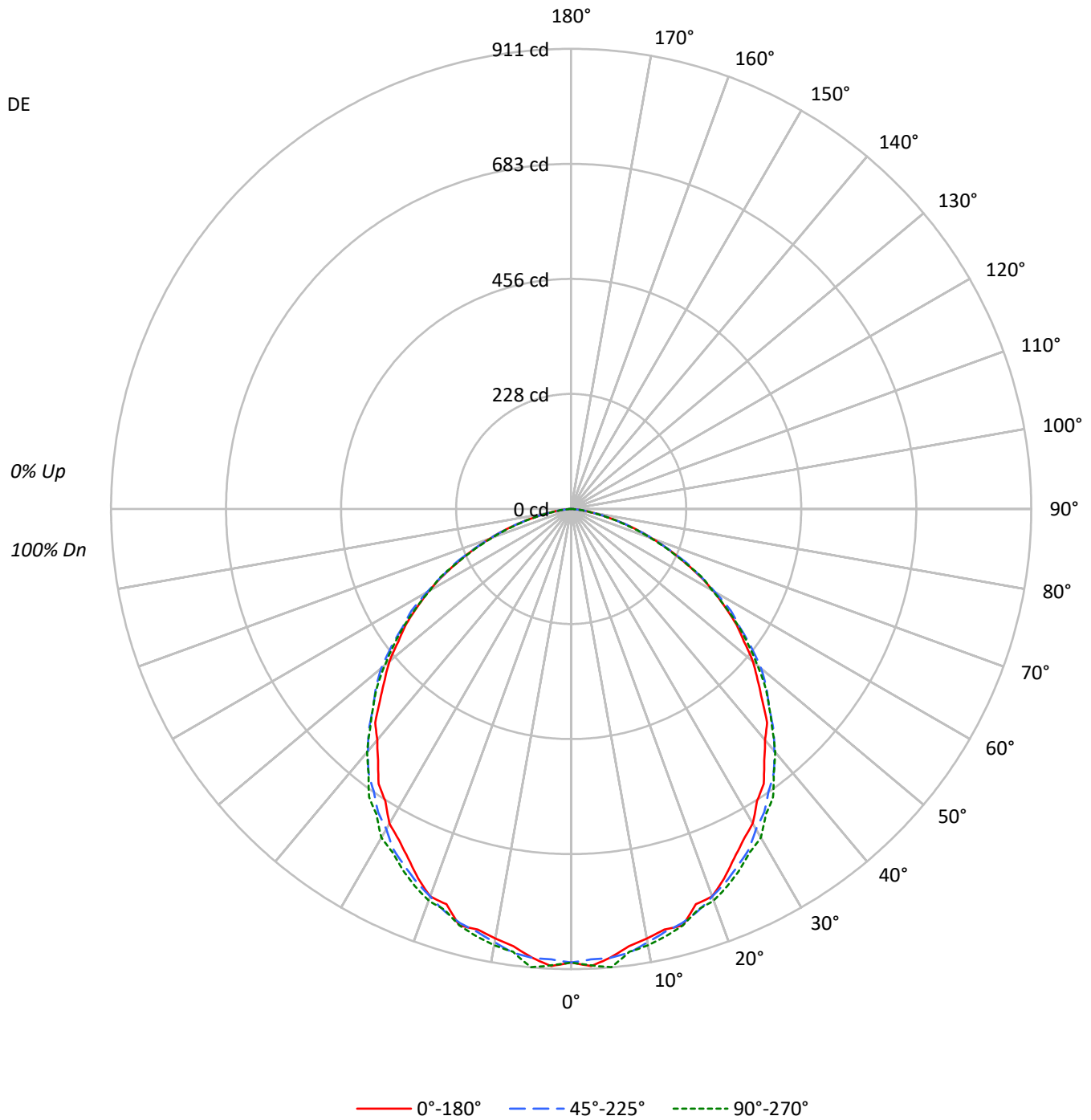
Lumens per Lamp: N/A
Luminaire Lumens: 2263.0 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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: P589919
CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-81-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589919

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-81-86-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					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°	2416	2416	2416
5°	2408	2409	2460
10°	2360	2380	2397
15°	2378	2365	2378
20°	2338	2338	2363
25°	2266	2316	2341
30°	2235	2274	2335
35°	2182	2239	2290
40°	2098	2198	2208
45°	2034	2106	2109
50°	1967	2056	2017
55°	1874	1911	1897
60°	1753	1770	1738
65°	1563	1603	1552
70°	1341	1345	1308
75°	1062	1059	1019
80°	711	691	665
85°	386	383	358

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2160 cd/sqm



TEST NUMBER: P589919

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-81-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.5	3.7
10°-20°	239.4	10.6
20°-30°	358.6	15.8
30°-40°	425.1	18.8
40°-50°	425.8	18.8
50°-60°	361.5	16.0
60°-70°	243.7	10.8
70°-80°	107.1	4.7
80°-90°	17.4	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°	682.5	30.2
0°-40°	1107.5	48.9
0°-60°	1894.8	83.7
0°-90°	2263.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2263.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	898	898	898	898	898	
5°	892	889	892	889	911	84
15°	854	844	849	853	854	238
25°	763	767	780	790	788	353
35°	664	666	682	698	697	412
45°	534	544	554	568	554	413
55°	400	397	407	404	404	355
65°	245	242	252	242	244	244
75°	102	100	102	95	98	109
85°	12	12	12	12	12	18
90°	0	0	0	0	0	



TEST NUMBER: P589919

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-81-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	897.9	897.9	897.9	897.9	897.9
2.5°	905.7	898.8	892.5	899.9	904.4
5°	891.5	889.4	891.9	889.2	910.7
7.5°	873.2	881.2	885.8	882.9	884.2
10°	863.5	860.7	871.0	878.2	877.1
12.5°	853.0	857.2	857.8	865.6	866.3
15°	853.6	843.8	849.0	853.4	853.7
17.5°	820.5	831.1	834.7	844.8	832.3
20°	816.4	808.6	816.4	826.7	825.1
22.5°	791.5	782.8	799.5	808.6	808.1
25°	763.2	767.4	779.9	790.1	788.5
27.5°	738.4	743.2	761.1	775.1	766.1
30°	719.2	716.8	731.9	744.4	751.4
32.5°	685.0	693.9	711.5	723.9	717.3
35°	664.3	666.3	681.7	697.5	697.0
37.5°	628.0	637.2	658.8	663.3	659.2
40°	597.1	606.2	625.8	630.6	628.6
42.5°	574.2	575.8	592.6	598.1	589.4
45°	534.5	544.4	553.5	567.7	554.3
47.5°	500.6	505.2	524.7	528.5	521.5
50°	469.9	471.5	491.1	486.3	481.7
52.5°	431.3	438.1	449.1	448.2	442.7
55°	399.5	396.8	407.3	404.5	404.4
57.5°	361.4	366.0	374.6	370.2	363.1
60°	325.7	325.8	328.9	323.9	323.0
62.5°	285.9	287.3	288.0	281.8	291.8
65°	245.4	242.2	251.7	242.1	243.7
67.5°	208.2	209.8	208.9	202.9	205.2
70°	170.4	172.5	171.0	164.2	166.2
72.5°	135.9	133.3	134.9	126.4	130.3
75°	102.1	100.1	101.9	94.7	98.0
77.5°	69.6	71.2	70.0	66.2	68.4
80°	45.9	44.6	44.6	42.4	42.9
82.5°	26.8	25.5	25.2	24.5	25.5
85°	12.5	12.2	12.4	12.1	11.6
87.5°	4.5	4.6	4.6	4.4	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)