

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: P590077

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590077
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-LD4-1STD-40-UNV-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1872.0 lumens
Efficiency: N/A
Efficacy: 112.8 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

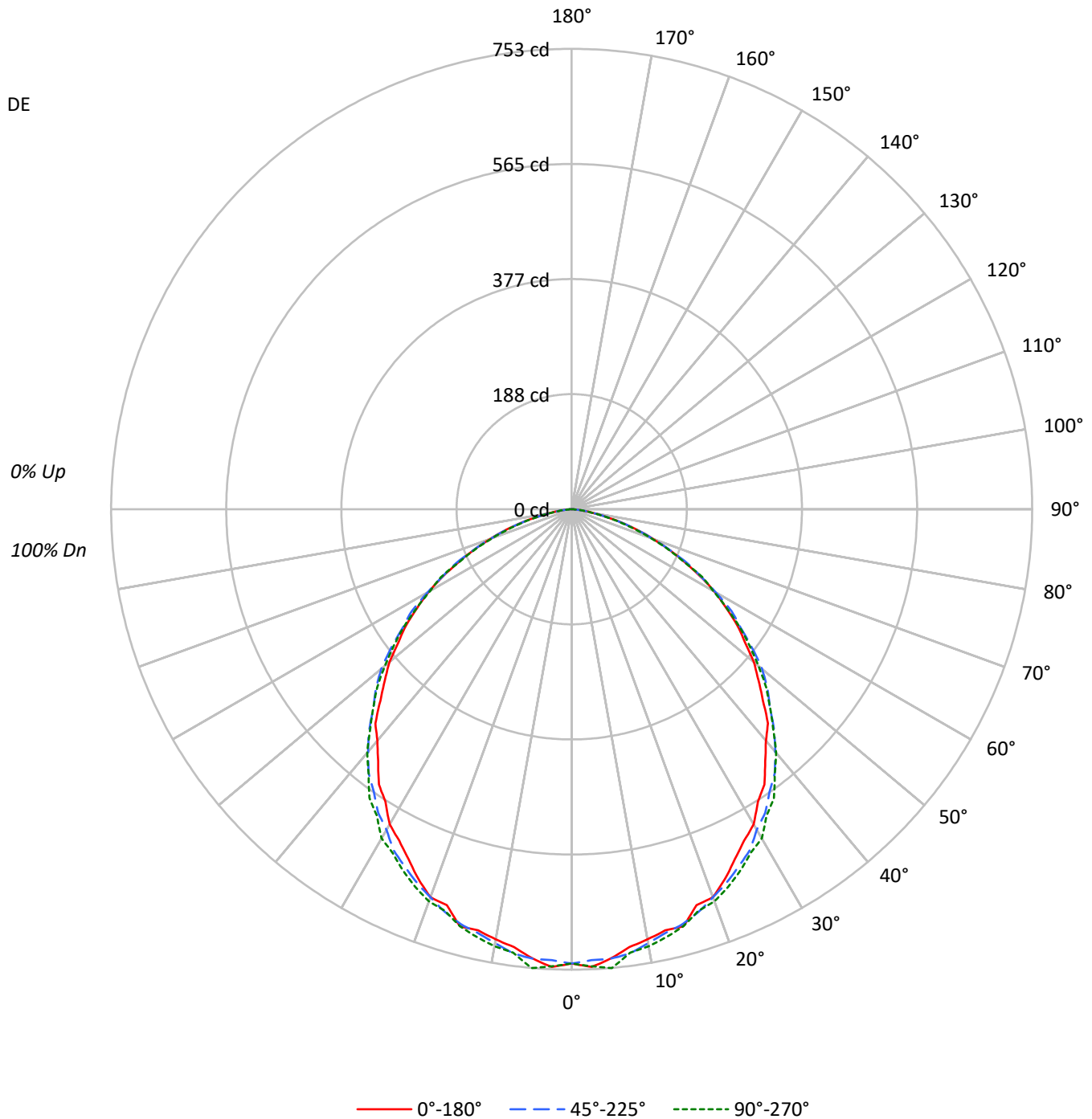
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590077

CATALOG NUMBER: FSR-24-2-LD4-1STD-40-UNV-81-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590077

CATALOG NUMBER: FSR-24-2-LD4-1STD-40-UNV-81-84-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	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°	1999	1999	1999
5°	1992	1993	2035
10°	1952	1969	1983
15°	1967	1957	1967
20°	1934	1934	1954
25°	1874	1915	1936
30°	1849	1881	1931
35°	1805	1852	1894
40°	1735	1819	1827
45°	1682	1742	1745
50°	1627	1701	1668
55°	1551	1581	1569
60°	1450	1464	1438
65°	1293	1326	1284
70°	1109	1113	1082
75°	879	876	842
80°	589	572	550
85°	321	318	296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1787 cd/sqm



TEST NUMBER: P590077

CATALOG NUMBER: FSR-24-2-LD4-1STD-40-UNV-81-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.9	3.7
10°-20°	198.0	10.6
20°-30°	296.7	15.8
30°-40°	351.6	18.8
40°-50°	352.3	18.8
50°-60°	299.0	16.0
60°-70°	201.6	10.8
70°-80°	88.6	4.7
80°-90°	14.4	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°	564.5	30.2
0°-40°	916.2	48.9
0°-60°	1567.4	83.7
0°-90°	1872.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1872.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	743	743	743	743	743	
5°	738	736	738	736	753	70
15°	706	698	702	706	706	197
25°	631	635	645	654	652	292
35°	550	551	564	577	577	341
45°	442	450	458	470	458	342
55°	330	328	337	335	334	294
65°	203	200	208	200	202	202
75°	84	83	84	78	81	91
85°	10	10	10	10	10	15
90°	0	0	0	0	0	



TEST NUMBER: P590077

CATALOG NUMBER: FSR-24-2-LD4-1STD-40-UNV-81-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	742.8	742.8	742.8	742.8	742.8
2.5°	749.2	743.5	738.3	744.4	748.1
5°	737.5	735.8	737.8	735.6	753.3
7.5°	722.3	729.0	732.8	730.4	731.4
10°	714.3	712.0	720.5	726.5	725.6
12.5°	705.6	709.1	709.6	716.0	716.6
15°	706.1	698.0	702.3	705.9	706.2
17.5°	678.7	687.5	690.5	698.8	688.5
20°	675.3	668.9	675.3	683.9	682.5
22.5°	654.7	647.5	661.3	668.9	668.4
25°	631.3	634.8	645.1	653.6	652.2
27.5°	610.8	614.8	629.6	641.2	633.7
30°	595.0	593.0	605.4	615.8	621.5
32.5°	566.7	574.0	588.6	598.8	593.3
35°	549.5	551.1	563.9	576.9	576.6
37.5°	519.5	527.1	545.0	548.7	545.3
40°	493.9	501.5	517.7	521.6	520.0
42.5°	475.0	476.3	490.3	494.8	487.6
45°	442.1	450.4	457.8	469.6	458.5
47.5°	414.1	417.9	434.1	437.2	431.4
50°	388.7	390.0	406.2	402.3	398.5
52.5°	356.8	362.4	371.5	370.8	366.3
55°	330.5	328.3	336.9	334.6	334.5
57.5°	298.9	302.8	309.9	306.2	300.4
60°	269.4	269.5	272.1	268.0	267.2
62.5°	236.5	237.6	238.2	233.1	241.4
65°	203.0	200.3	208.2	200.2	201.6
67.5°	172.2	173.6	172.8	167.8	169.7
70°	141.0	142.7	141.5	135.8	137.5
72.5°	112.4	110.3	111.6	104.5	107.8
75°	84.5	82.8	84.3	78.4	81.0
77.5°	57.5	58.9	57.9	54.8	56.6
80°	38.0	36.9	36.9	35.1	35.5
82.5°	22.2	21.1	20.8	20.2	21.1
85°	10.4	10.1	10.3	10.0	9.6
87.5°	3.7	3.8	3.8	3.6	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)