

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: P590082

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590082
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-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1876.0 lumens
Efficiency: N/A
Efficacy: 113.0 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

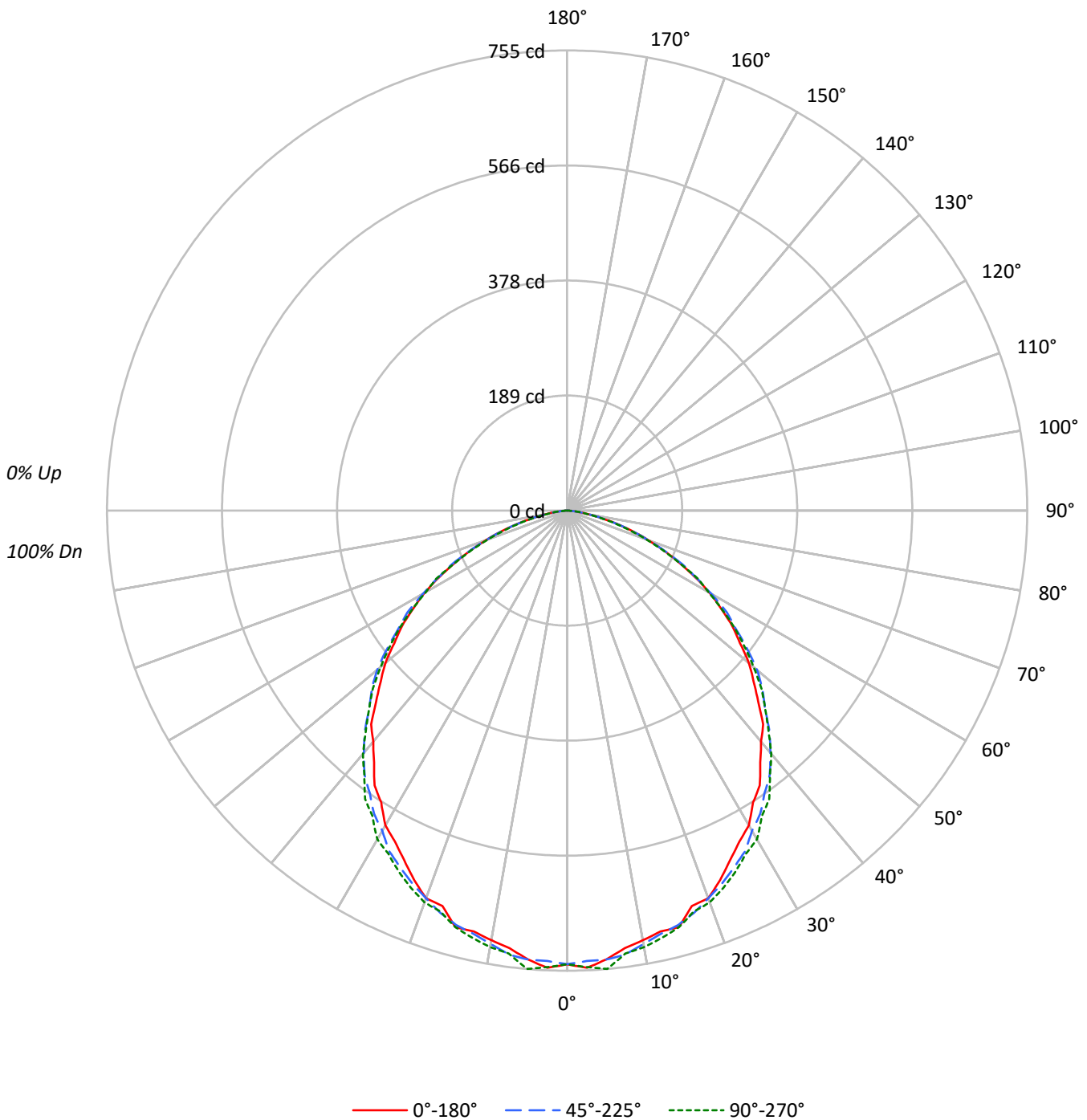
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590082

CATALOG NUMBER: FSR-24-2-LD4-1STD-40-UNV-81-94-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P590082

CATALOG NUMBER: FSR-24-2-LD4-1STD-40-UNV-81-94-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°	2003	2003	2003
5°	1996	1997	2039
10°	1956	1973	1987
15°	1971	1961	1972
20°	1938	1938	1959
25°	1879	1920	1941
30°	1853	1885	1936
35°	1809	1856	1898
40°	1739	1822	1831
45°	1686	1746	1749
50°	1631	1704	1672
55°	1554	1584	1573
60°	1453	1468	1441
65°	1296	1328	1286
70°	1112	1116	1084
75°	881	879	844
80°	590	573	552
85°	321	318	296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1791 cd/sqm



TEST NUMBER: P590082

CATALOG NUMBER: FSR-24-2-LD4-1STD-40-UNV-81-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.0	3.7
10°-20°	198.4	10.6
20°-30°	297.3	15.8
30°-40°	352.4	18.8
40°-50°	353.0	18.8
50°-60°	299.7	16.0
60°-70°	202.0	10.8
70°-80°	88.8	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°	565.8	30.2
0°-40°	918.1	48.9
0°-60°	1570.8	83.7
0°-90°	1876.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1876.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	744	744	744	744	744	
5°	739	737	739	737	755	70
15°	708	700	704	707	708	197
25°	633	636	646	655	654	292
35°	551	552	565	578	578	342
45°	443	451	459	471	460	343
55°	331	329	338	335	335	295
65°	204	201	209	201	202	202
75°	85	83	84	78	81	91
85°	10	10	10	10	10	15
90°	0	0	0	0	0	



TEST NUMBER: P590082

CATALOG NUMBER: FSR-24-2-LD4-1STD-40-UNV-81-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	744.3	744.3	744.3	744.3	744.3
2.5°	750.8	745.1	739.8	746.0	749.7
5°	739.1	737.3	739.4	737.1	754.9
7.5°	723.9	730.5	734.4	732.0	733.0
10°	715.8	713.5	722.1	728.0	727.1
12.5°	707.2	710.6	711.1	717.5	718.1
15°	707.6	699.5	703.8	707.4	707.7
17.5°	680.1	689.0	692.0	700.3	690.0
20°	676.8	670.3	676.8	685.3	684.0
22.5°	656.1	648.9	662.8	670.3	669.9
25°	632.7	636.1	646.5	655.0	653.6
27.5°	612.1	616.1	630.9	642.6	635.1
30°	596.2	594.2	606.7	617.1	622.9
32.5°	567.9	575.2	589.8	600.1	594.6
35°	550.7	552.3	565.1	578.2	577.8
37.5°	520.6	528.2	546.2	549.8	546.5
40°	495.0	502.5	518.8	522.7	521.1
42.5°	476.0	477.4	491.3	495.8	488.6
45°	443.1	451.3	458.8	470.6	459.5
47.5°	415.0	418.8	435.0	438.2	432.3
50°	389.5	390.9	407.1	403.2	399.3
52.5°	357.5	363.2	372.3	371.6	367.0
55°	331.2	329.0	337.6	335.3	335.2
57.5°	299.6	303.4	310.5	306.9	301.0
60°	270.0	270.1	272.7	268.5	267.8
62.5°	237.0	238.2	238.7	233.6	241.9
65°	203.5	200.8	208.6	200.7	202.0
67.5°	172.6	174.0	173.2	168.2	170.1
70°	141.3	143.0	141.8	136.1	137.8
72.5°	112.6	110.5	111.9	104.8	108.0
75°	84.7	82.9	84.5	78.5	81.2
77.5°	57.7	59.0	58.0	54.9	56.7
80°	38.1	37.0	37.0	35.2	35.6
82.5°	22.2	21.1	20.9	20.3	21.1
85°	10.4	10.1	10.3	10.0	9.6
87.5°	3.7	3.8	3.8	3.7	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)