

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: P590096

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590096
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-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1852.0 lumens
Efficiency: N/A
Efficacy: 111.6 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

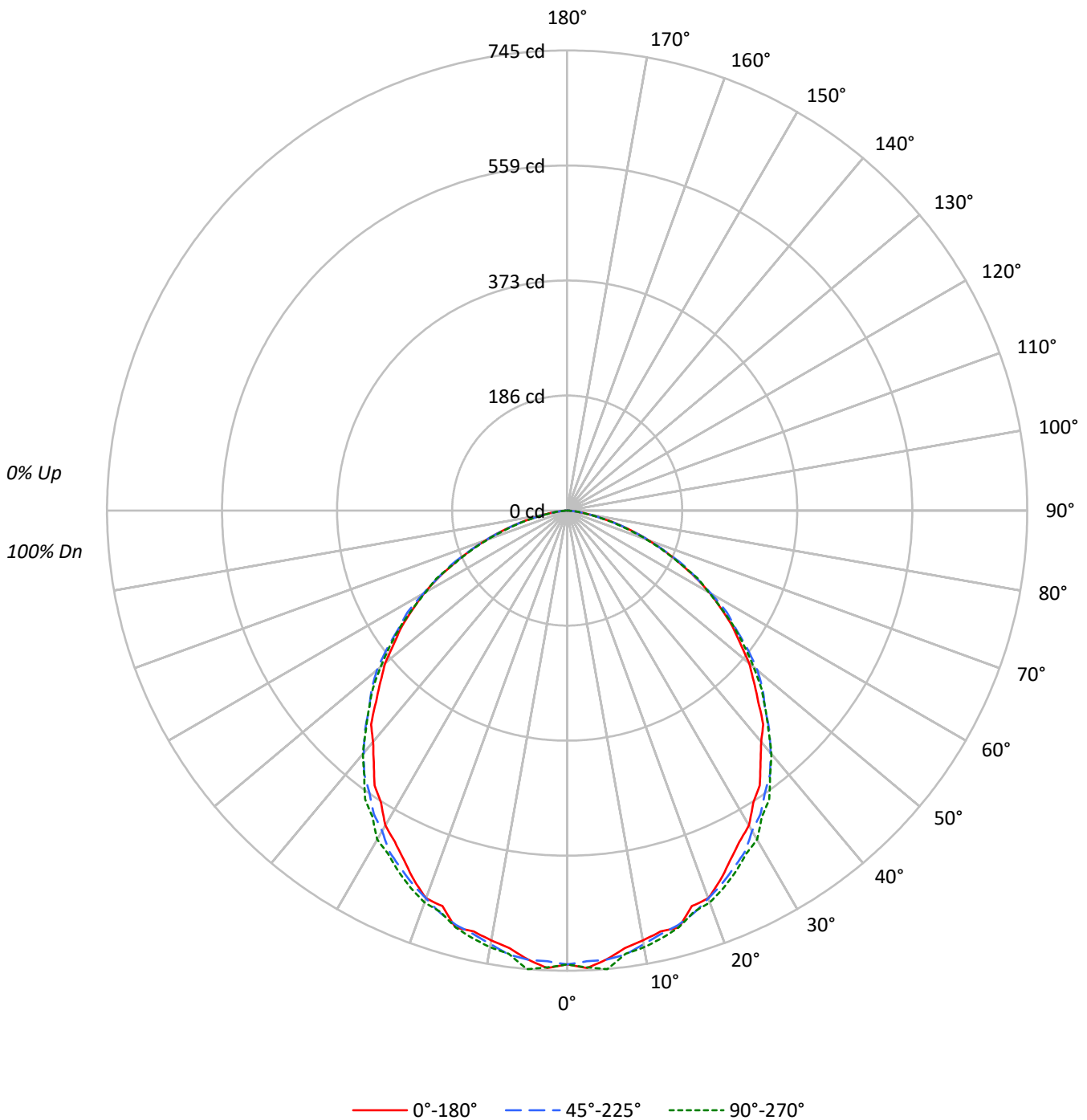
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1977	1977	1977
5°	1971	1972	2013
10°	1931	1948	1961
15°	1946	1936	1947
20°	1913	1913	1934
25°	1855	1895	1916
30°	1829	1861	1911
35°	1786	1833	1874
40°	1716	1799	1807
45°	1665	1724	1726
50°	1610	1683	1650
55°	1534	1564	1552
60°	1434	1449	1422
65°	1279	1312	1270
70°	1098	1101	1071
75°	869	867	834
80°	583	566	544
85°	315	315	293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1768 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.1	3.7
10°-20°	195.9	10.6
20°-30°	293.5	15.8
30°-40°	347.9	18.8
40°-50°	348.5	18.8
50°-60°	295.8	16.0
60°-70°	199.4	10.8
70°-80°	87.6	4.7
80°-90°	14.2	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°	558.5	30.2
0°-40°	906.4	48.9
0°-60°	1550.7	83.7
0°-90°	1852.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1852.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	735	735	735	735	735	
5°	730	728	730	728	745	69
15°	699	690	695	698	699	195
25°	625	628	638	647	645	289
35°	544	545	558	571	570	338
45°	437	446	453	465	454	338
55°	327	325	333	331	331	291
65°	201	198	206	198	199	200
75°	84	82	83	78	80	90
85°	10	10	10	10	10	15
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	734.8	734.8	734.8	734.8	734.8
2.5°	741.2	735.6	730.4	736.4	740.1
5°	729.6	727.9	729.9	727.7	745.3
7.5°	714.6	721.2	725.0	722.6	723.6
10°	706.6	704.4	712.8	718.7	717.8
12.5°	698.1	701.5	702.0	708.4	708.9
15°	698.6	690.5	694.8	698.4	698.7
17.5°	671.4	680.2	683.1	691.4	681.1
20°	668.1	661.8	668.1	676.6	675.2
22.5°	647.7	640.6	654.3	661.8	661.3
25°	624.6	628.0	638.2	646.6	645.3
27.5°	604.3	608.3	622.9	634.4	627.0
30°	588.6	586.6	599.0	609.2	614.9
32.5°	560.6	567.8	582.3	592.4	587.0
35°	543.6	545.3	557.9	570.8	570.4
37.5°	514.0	521.4	539.2	542.8	539.5
40°	488.6	496.1	512.1	516.0	514.4
42.5°	469.9	471.3	485.0	489.5	482.4
45°	437.4	445.5	452.9	464.6	453.6
47.5°	409.7	413.5	429.4	432.5	426.8
50°	384.5	385.9	401.9	398.0	394.2
52.5°	352.9	358.5	367.6	366.8	362.3
55°	326.9	324.8	333.3	331.0	330.9
57.5°	295.7	299.5	306.5	302.9	297.2
60°	266.5	266.6	269.2	265.1	264.3
62.5°	234.0	235.1	235.7	230.6	238.8
65°	200.9	198.2	206.0	198.1	199.4
67.5°	170.4	171.7	171.0	166.0	167.9
70°	139.5	141.2	139.9	134.3	136.1
72.5°	111.2	109.1	110.4	103.4	106.6
75°	83.6	81.9	83.4	77.5	80.2
77.5°	56.9	58.3	57.3	54.2	56.0
80°	37.6	36.5	36.5	34.7	35.1
82.5°	21.9	20.9	20.6	20.0	20.9
85°	10.2	10.0	10.2	9.9	9.5
87.5°	3.7	3.8	3.8	3.6	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)