

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: P590131

Luminaire Tested: FSR-24-2-LD4-1STD-50-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590131
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-50-UNV-93-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1991.0 lumens
Efficiency: N/A
Efficacy: 119.9 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

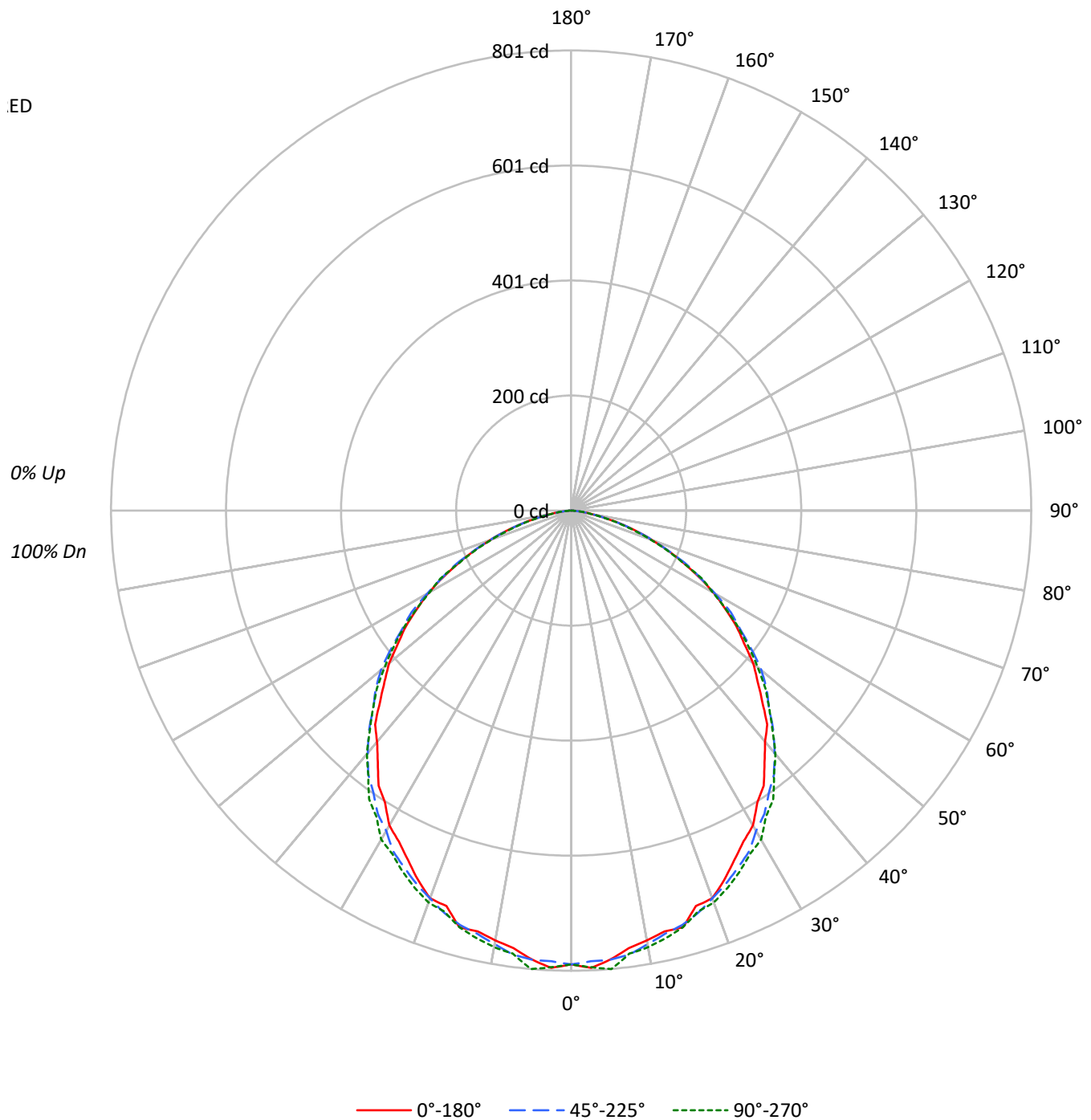
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2126	2126	2126
5°	2119	2120	2164
10°	2076	2094	2109
15°	2092	2081	2092
20°	2057	2057	2079
25°	1994	2037	2060
30°	1966	2001	2054
35°	1920	1970	2014
40°	1845	1934	1943
45°	1789	1853	1856
50°	1731	1809	1774
55°	1649	1681	1669
60°	1542	1558	1530
65°	1375	1410	1365
70°	1179	1183	1151
75°	935	933	896
80°	626	609	584
85°	340	337	315

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1901 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	3.7
10°-20°	210.6	10.6
20°-30°	315.5	15.8
30°-40°	374.0	18.8
40°-50°	374.7	18.8
50°-60°	318.0	16.0
60°-70°	214.4	10.8
70°-80°	94.2	4.7
80°-90°	15.3	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°	600.4	30.2
0°-40°	974.4	48.9
0°-60°	1667.1	83.7
0°-90°	1991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1991.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	790	790	790	790	790	
5°	784	782	785	782	801	74
15°	751	742	747	751	751	209
25°	672	675	686	695	694	310
35°	584	586	600	614	613	363
45°	470	479	487	500	488	364
55°	352	349	358	356	356	313
65°	216	213	221	213	214	215
75°	90	88	90	83	86	96
85°	11	11	11	11	10	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	790.0	790.0	790.0	790.0	790.0
2.5°	796.8	790.8	785.2	791.7	795.7
5°	784.4	782.5	784.7	782.3	801.2
7.5°	768.3	775.3	779.4	776.8	777.9
10°	759.7	757.2	766.3	772.6	771.7
12.5°	750.5	754.2	754.7	761.5	762.1
15°	751.0	742.3	746.9	750.8	751.1
17.5°	721.8	731.2	734.4	743.3	732.2
20°	718.3	711.4	718.3	727.4	725.9
22.5°	696.3	688.7	703.4	711.4	710.9
25°	671.5	675.1	686.1	695.1	693.7
27.5°	649.6	653.9	669.6	682.0	674.0
30°	632.8	630.7	643.9	654.9	661.1
32.5°	602.7	610.5	626.0	636.9	631.1
35°	584.5	586.2	599.8	613.6	613.2
37.5°	552.5	560.6	579.7	583.5	580.0
40°	525.3	533.4	550.6	554.8	553.0
42.5°	505.2	506.6	521.4	526.2	518.6
45°	470.2	479.0	486.9	499.5	487.7
47.5°	440.4	444.5	461.6	465.0	458.8
50°	413.4	414.8	432.1	427.9	423.8
52.5°	379.4	385.5	395.1	394.3	389.5
55°	351.5	349.1	358.3	355.9	355.8
57.5°	317.9	322.0	329.6	325.7	319.5
60°	286.5	286.6	289.4	285.0	284.2
62.5°	251.5	252.8	253.4	248.0	256.7
65°	215.9	213.1	221.4	213.0	214.4
67.5°	183.2	184.6	183.8	178.5	180.5
70°	149.9	151.8	150.4	144.4	146.3
72.5°	119.5	117.3	118.7	111.2	114.6
75°	89.9	88.0	89.7	83.3	86.2
77.5°	61.2	62.6	61.6	58.2	60.2
80°	40.4	39.3	39.3	37.3	37.7
82.5°	23.6	22.4	22.1	21.5	22.4
85°	11.0	10.7	10.9	10.6	10.2
87.5°	4.0	4.1	4.1	3.9	3.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)