

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: P590241

Luminaire Tested: FSR-24-2-LD4-2LO-35-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590241
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-LD4-2LO-35-UNV-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

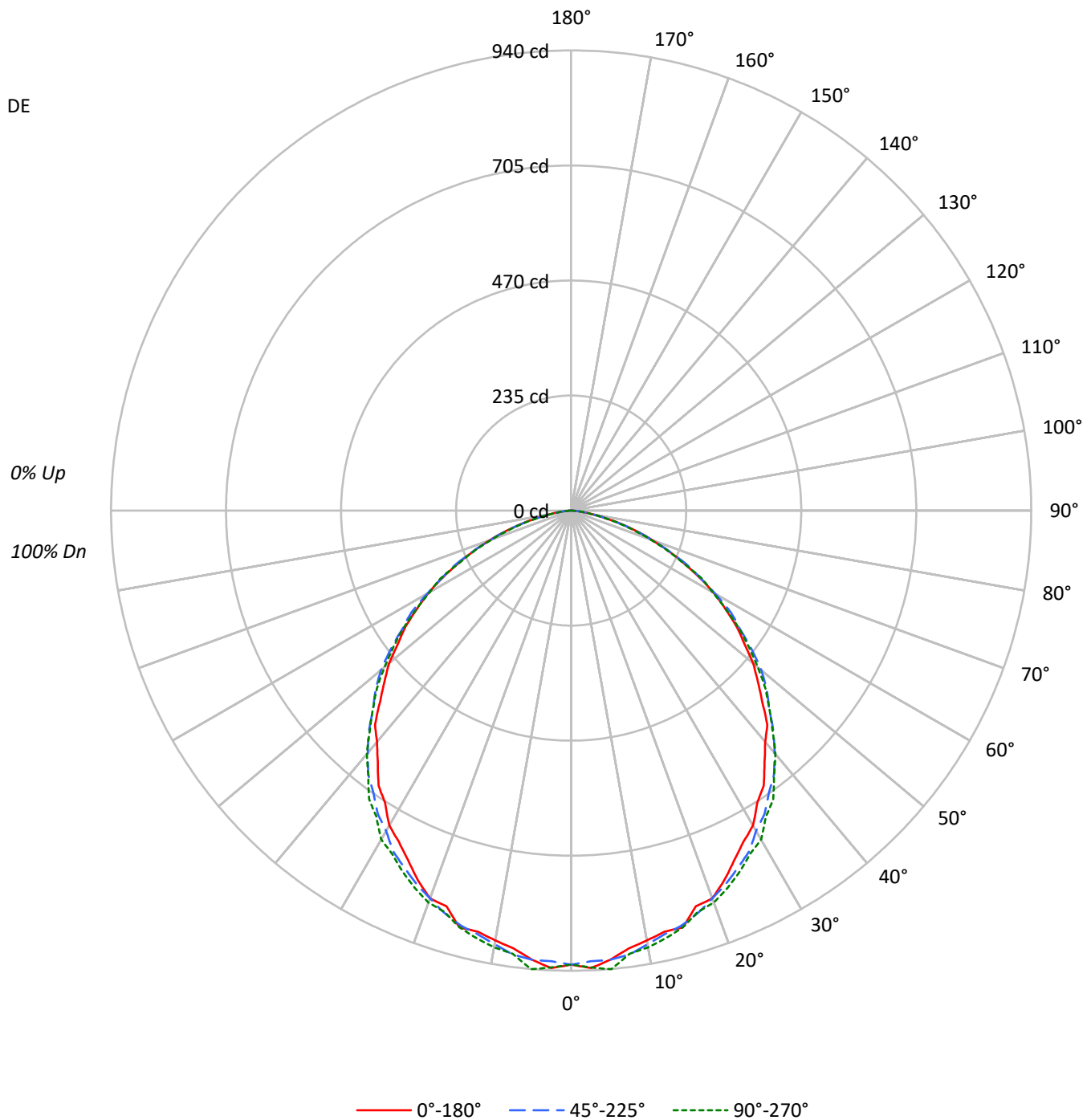
Lumens per Lamp: N/A
Luminaire Lumens: 2337.0 lumens
Efficiency: N/A
Efficacy: 99.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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	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°	2495	2495	2495
5°	2487	2488	2540
10°	2437	2458	2475
15°	2456	2442	2456
20°	2414	2414	2440
25°	2340	2391	2417
30°	2308	2348	2411
35°	2254	2313	2365
40°	2166	2270	2280
45°	2100	2175	2178
50°	2031	2123	2083
55°	1936	1973	1959
60°	1810	1828	1795
65°	1614	1655	1603
70°	1385	1389	1351
75°	1097	1094	1052
80°	735	714	687
85°	398	395	371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2231 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.2	3.7
10°-20°	247.2	10.6
20°-30°	370.4	15.8
30°-40°	438.9	18.8
40°-50°	439.8	18.8
50°-60°	373.3	16.0
60°-70°	251.7	10.8
70°-80°	110.6	4.7
80°-90°	18.0	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°	704.8	30.2
0°-40°	1143.7	48.9
0°-60°	1956.8	83.7
0°-90°	2337.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2337.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	927	927	927	927	927	
5°	921	918	921	918	940	87
15°	882	871	877	881	882	246
25°	788	792	805	816	814	364
35°	686	688	704	720	720	426
45°	552	562	572	586	572	427
55°	413	410	421	418	418	367
65°	254	250	260	250	252	252
75°	106	103	105	98	101	113
85°	13	13	13	12	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	927.3	927.3	927.3	927.3	927.3
2.5°	935.3	928.2	921.6	929.3	934.0
5°	920.7	918.5	921.0	918.3	940.4
7.5°	901.8	910.0	914.8	911.8	913.1
10°	891.7	888.8	899.5	906.9	905.8
12.5°	880.9	885.2	885.8	893.9	894.6
15°	881.5	871.4	876.7	881.3	881.6
17.5°	847.3	858.3	862.0	872.4	859.5
20°	843.1	835.1	843.1	853.8	852.1
22.5°	817.4	808.4	825.6	835.1	834.5
25°	788.1	792.5	805.4	815.9	814.2
27.5°	762.5	767.6	786.0	800.5	791.1
30°	742.8	740.3	755.8	768.7	775.9
32.5°	707.4	716.5	734.7	747.6	740.7
35°	686.0	688.1	704.0	720.3	719.8
37.5°	648.5	658.0	680.4	684.9	680.8
40°	616.6	626.0	646.3	651.2	649.1
42.5°	593.0	594.7	612.0	617.7	608.7
45°	551.9	562.2	571.6	586.3	572.4
47.5°	517.0	521.8	541.9	545.8	538.5
50°	485.2	486.9	507.2	502.2	497.5
52.5°	445.4	452.4	463.8	462.9	457.2
55°	412.6	409.8	420.6	417.7	417.6
57.5°	373.2	378.0	386.8	382.3	375.0
60°	336.3	336.4	339.7	334.5	333.6
62.5°	295.2	296.7	297.4	291.0	301.3
65°	253.5	250.1	259.9	250.0	251.7
67.5°	215.0	216.7	215.7	209.5	211.9
70°	176.0	178.1	176.6	169.5	171.7
72.5°	140.3	137.7	139.4	130.5	134.6
75°	105.5	103.3	105.2	97.8	101.2
77.5°	71.8	73.5	72.3	68.4	70.6
80°	47.4	46.1	46.1	43.8	44.3
82.5°	27.7	26.3	26.0	25.3	26.3
85°	12.9	12.6	12.8	12.5	12.0
87.5°	4.7	4.8	4.8	4.5	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)