

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: P590013

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590013
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-LD4-1LO-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

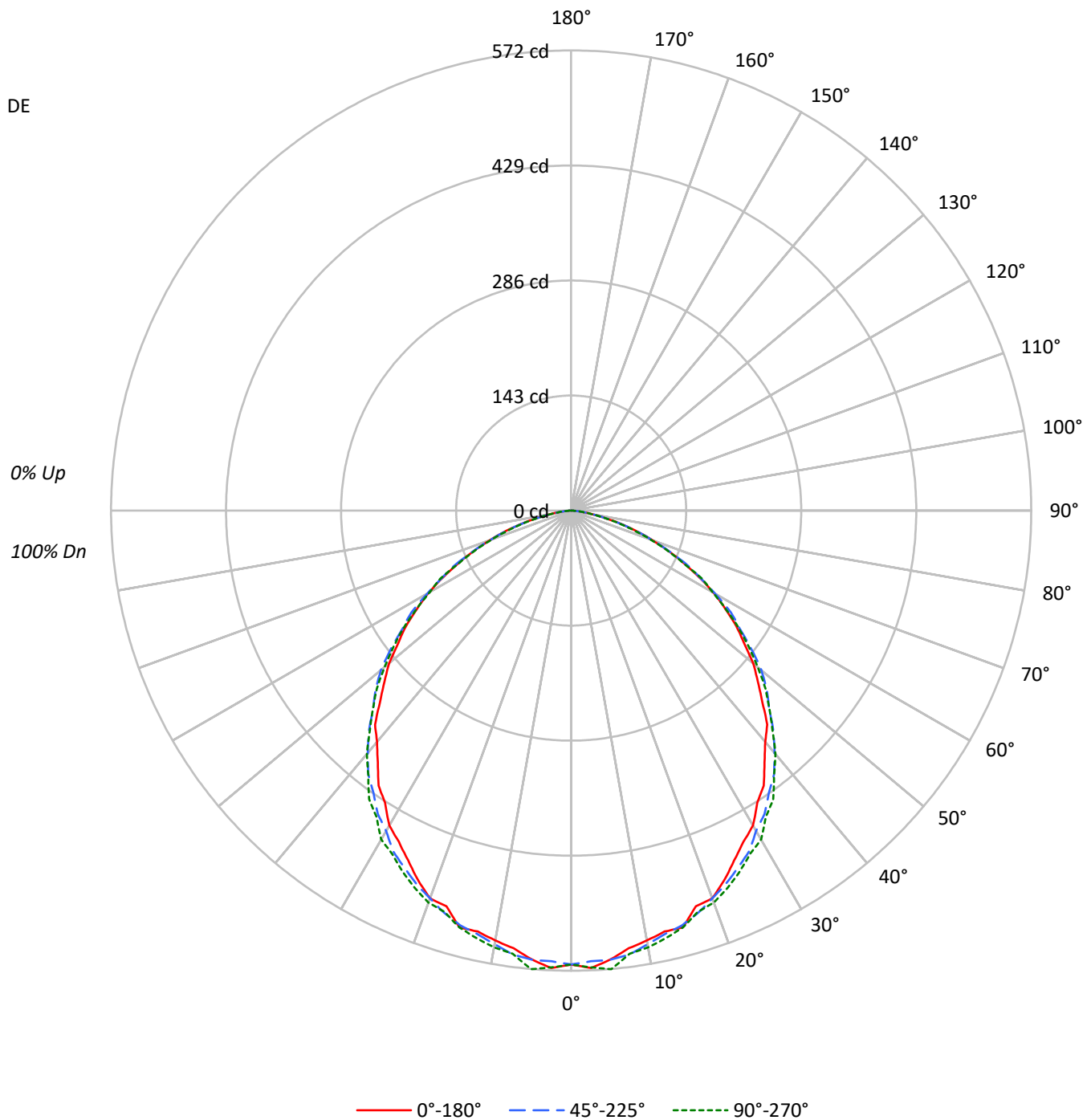
Lumens per Lamp: N/A
Luminaire Lumens: 1422.0 lumens
Efficiency: N/A
Efficacy: 121.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	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°	1518	1518	1518
5°	1513	1514	1546
10°	1483	1495	1506
15°	1494	1486	1495
20°	1469	1469	1485
25°	1424	1455	1471
30°	1404	1429	1467
35°	1371	1407	1439
40°	1318	1381	1388
45°	1278	1324	1325
50°	1236	1292	1267
55°	1178	1201	1192
60°	1101	1112	1093
65°	982	1007	975
70°	843	846	822
75°	667	665	640
80°	446	434	418
85°	244	241	225

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1357 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.1	3.7
10°-20°	150.4	10.6
20°-30°	225.4	15.8
30°-40°	267.1	18.8
40°-50°	267.6	18.8
50°-60°	227.1	16.0
60°-70°	153.1	10.8
70°-80°	67.3	4.7
80°-90°	10.9	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°	428.8	30.2
0°-40°	695.9	48.9
0°-60°	1190.7	83.7
0°-90°	1422.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1422.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	564	564	564	564	564	
5°	560	559	560	559	572	53
15°	536	530	534	536	536	149
25°	480	482	490	496	495	222
35°	417	419	428	438	438	259
45°	336	342	348	357	348	260
55°	251	249	256	254	254	223
65°	154	152	158	152	153	153
75°	64	63	64	60	62	69
85°	8	8	8	8	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	564.2	564.2	564.2	564.2	564.2
2.5°	569.1	564.8	560.8	565.5	568.3
5°	560.2	558.9	560.4	558.8	572.2
7.5°	548.7	553.7	556.6	554.8	555.6
10°	542.6	540.8	547.3	551.8	551.2
12.5°	536.0	538.6	539.0	543.9	544.3
15°	536.4	530.2	533.5	536.2	536.5
17.5°	515.6	522.3	524.5	530.8	523.0
20°	513.0	508.1	513.0	519.5	518.5
22.5°	497.3	491.9	502.4	508.1	507.8
25°	479.6	482.2	490.1	496.5	495.4
27.5°	464.0	467.0	478.3	487.1	481.4
30°	452.0	450.4	459.9	467.8	472.1
32.5°	430.5	436.0	447.1	454.9	450.7
35°	417.4	418.7	428.4	438.3	438.0
37.5°	394.6	400.4	414.0	416.8	414.2
40°	375.2	380.9	393.2	396.2	395.0
42.5°	360.8	361.8	372.4	375.8	370.4
45°	335.8	342.1	347.8	356.7	348.3
47.5°	314.6	317.5	329.7	332.1	327.7
50°	295.3	296.3	308.6	305.6	302.7
52.5°	271.0	275.3	282.2	281.6	278.2
55°	251.0	249.4	255.9	254.2	254.1
57.5°	227.1	230.0	235.4	232.6	228.2
60°	204.6	204.7	206.7	203.5	203.0
62.5°	179.6	180.5	181.0	177.1	183.4
65°	154.2	152.2	158.2	152.1	153.1
67.5°	130.8	131.9	131.3	127.5	128.9
70°	107.1	108.4	107.5	103.2	104.5
72.5°	85.4	83.8	84.8	79.4	81.9
75°	64.2	62.9	64.0	59.5	61.6
77.5°	43.7	44.7	44.0	41.6	43.0
80°	28.8	28.0	28.0	26.7	27.0
82.5°	16.8	16.0	15.8	15.4	16.0
85°	7.9	7.6	7.8	7.6	7.3
87.5°	2.8	2.9	2.9	2.8	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)