

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: P589984

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589984
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-40-UNV-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

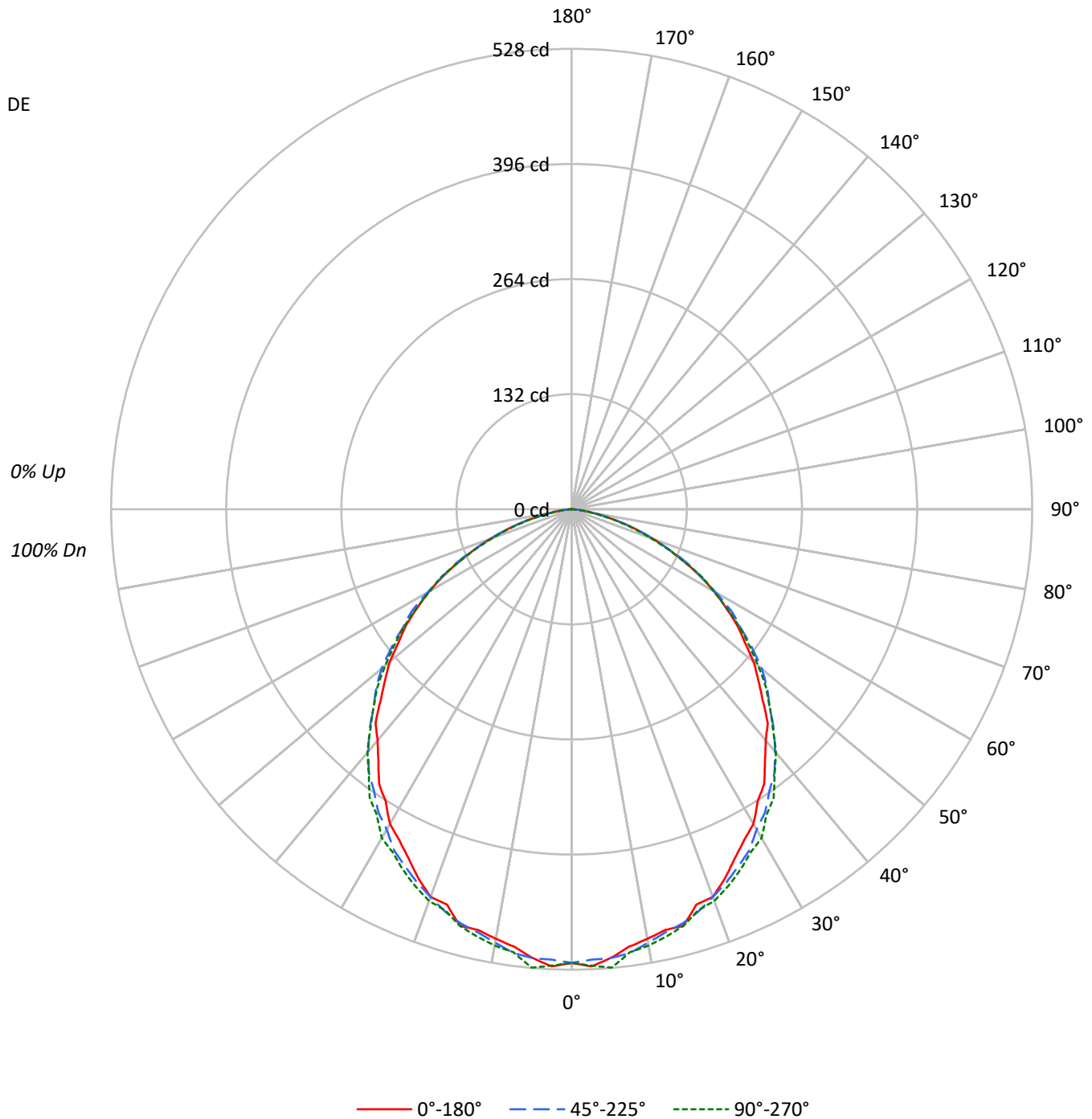
Lumens per Lamp: N/A
Luminaire Lumens: 1311.0 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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				
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°	1400	1400	1400
5°	1395	1396	1425
10°	1367	1379	1388
15°	1378	1370	1378
20°	1355	1355	1369
25°	1313	1341	1356
30°	1295	1317	1353
35°	1264	1297	1327
40°	1215	1273	1279
45°	1178	1220	1222
50°	1140	1191	1168
55°	1086	1107	1099
60°	1016	1025	1007
65°	905	928	899
70°	777	780	758
75°	616	613	591
80°	412	401	386
85°	225	222	207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1252 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.9	3.7
10°-20°	138.7	10.6
20°-30°	207.8	15.8
30°-40°	246.2	18.8
40°-50°	246.7	18.8
50°-60°	209.4	16.0
60°-70°	141.2	10.8
70°-80°	62.0	4.7
80°-90°	10.1	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°	395.4	30.2
0°-40°	641.6	48.9
0°-60°	1097.7	83.7
0°-90°	1311.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1311.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	516	515	517	515	528	49
15°	494	489	492	494	495	138
25°	442	444	452	458	457	204
35°	385	386	395	404	404	239
45°	310	315	321	329	321	240
55°	231	230	236	234	234	206
65°	142	140	146	140	141	141
75°	59	58	59	55	57	63
85°	7	7	7	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	520.2	520.2	520.2	520.2	520.2
2.5°	524.7	520.7	517.0	521.3	523.9
5°	516.5	515.3	516.7	515.1	527.6
7.5°	505.9	510.5	513.2	511.5	512.2
10°	500.2	498.6	504.6	508.8	508.1
12.5°	494.2	496.6	496.9	501.4	501.8
15°	494.5	488.8	491.8	494.4	494.6
17.5°	475.3	481.5	483.6	489.4	482.2
20°	473.0	468.5	473.0	478.9	478.0
22.5°	458.5	453.5	463.2	468.5	468.1
25°	442.1	444.5	451.8	457.7	456.8
27.5°	427.8	430.6	440.9	449.0	443.8
30°	416.7	415.3	424.0	431.2	435.3
32.5°	396.9	402.0	412.2	419.4	415.5
35°	384.8	386.0	394.9	404.0	403.8
37.5°	363.8	369.1	381.7	384.2	381.9
40°	345.9	351.2	362.5	365.3	364.2
42.5°	332.7	333.6	343.3	346.5	341.5
45°	309.6	315.4	320.6	328.9	321.1
47.5°	290.0	292.7	304.0	306.2	302.1
50°	272.2	273.1	284.5	281.7	279.1
52.5°	249.8	253.8	260.2	259.6	256.5
55°	231.4	229.9	235.9	234.3	234.3
57.5°	209.3	212.0	217.0	214.4	210.4
60°	188.7	188.7	190.5	187.7	187.1
62.5°	165.6	166.4	166.8	163.3	169.0
65°	142.2	140.3	145.8	140.2	141.2
67.5°	120.6	121.6	121.0	117.5	118.9
70°	98.7	99.9	99.1	95.1	96.3
72.5°	78.7	77.2	78.2	73.2	75.5
75°	59.2	58.0	59.0	54.9	56.8
77.5°	40.3	41.2	40.6	38.3	39.6
80°	26.6	25.9	25.9	24.6	24.9
82.5°	15.5	14.8	14.6	14.2	14.8
85°	7.3	7.1	7.2	7.0	6.7
87.5°	2.6	2.7	2.7	2.6	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)