

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: P562181

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562181
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-1LO-40-UNV-81-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

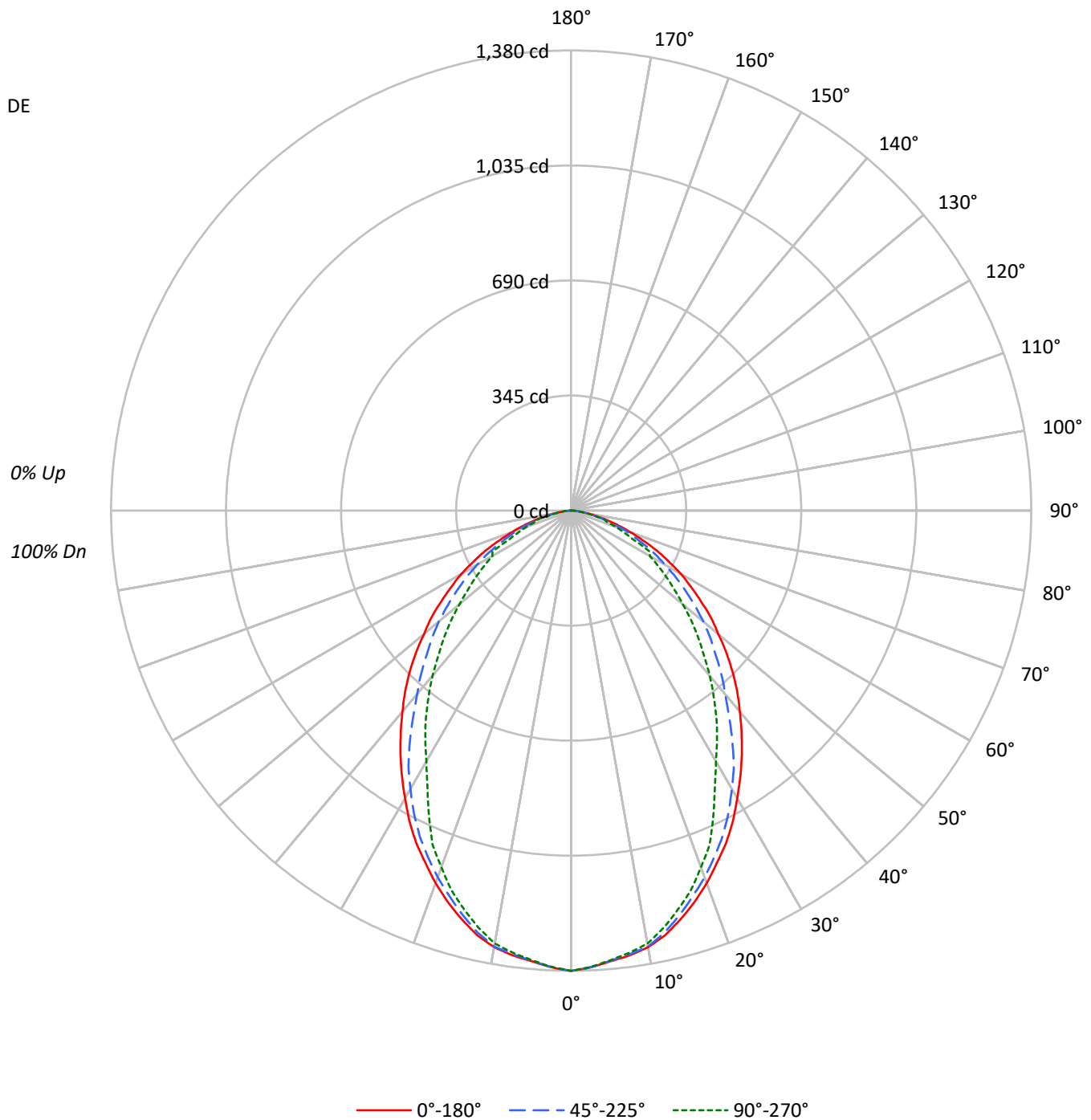
Lumens per Lamp: N/A
Luminaire Lumens: 2710.0 lumens
Efficiency: N/A
Efficacy: 115.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1857	1857	1857
5°	1832	1830	1828
10°	1816	1814	1801
15°	1767	1750	1725
20°	1702	1675	1629
25°	1632	1597	1497
30°	1547	1498	1349
35°	1465	1384	1248
40°	1382	1261	1135
45°	1303	1166	1026
50°	1206	1082	915
55°	1116	981	820
60°	1022	876	734
65°	899	767	650
70°	741	672	552
75°	589	514	539
80°	396	371	346
85°	247	296	344

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1303 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.5	4.7
10°-20°	352.7	13.0
20°-30°	488.2	18.0
30°-40°	520.6	19.2
40°-50°	474.9	17.5
50°-60°	372.1	13.7
60°-70°	242.5	8.9
70°-80°	107.4	4.0
80°-90°	23.1	0.9
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°	969.4	35.8
0°-40°	1490.0	55.0
0°-60°	2337.0	86.2
0°-90°	2710.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2710.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1380	1380	1380	1380	1380	
5°	1356	1355	1355	1353	1353	129
15°	1269	1269	1256	1243	1238	357
25°	1100	1093	1076	1037	1009	505
35°	892	886	843	779	760	558
45°	685	670	613	562	539	527
55°	476	461	418	369	350	427
65°	282	266	241	246	204	278
75°	113	105	99	94	104	121
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1380.4	1380.4	1380.4	1380.4	1380.4
2.5°	1370.9	1370.9	1370.9	1369.3	1369.3
5°	1356.5	1354.9	1354.9	1353.3	1353.3
7.5°	1345.3	1343.7	1342.1	1340.5	1337.3
10°	1329.4	1329.4	1327.8	1319.8	1318.2
12.5°	1303.8	1302.2	1295.9	1284.7	1281.5
15°	1268.7	1268.7	1256.0	1243.2	1238.4
17.5°	1230.4	1228.8	1212.9	1200.1	1193.7
20°	1188.9	1185.7	1169.8	1149.0	1137.9
22.5°	1142.7	1142.7	1123.5	1096.4	1085.2
25°	1099.6	1093.2	1075.6	1037.3	1008.6
27.5°	1050.1	1040.5	1021.4	967.1	933.6
30°	995.8	991.0	963.9	893.7	868.2
32.5°	944.8	936.8	908.1	834.6	813.9
35°	892.1	885.7	842.6	778.8	759.6
37.5°	839.4	831.5	777.2	726.1	702.2
40°	786.8	777.2	718.1	671.9	646.3
42.5°	737.3	724.5	667.1	617.6	588.9
45°	684.6	670.3	612.8	561.8	539.4
47.5°	632.0	619.2	566.5	513.9	488.3
50°	576.1	564.9	517.1	464.4	437.3
52.5°	529.8	512.3	466.0	413.3	391.0
55°	475.6	461.2	418.1	368.6	349.5
57.5°	426.1	411.7	371.8	325.6	309.6
60°	379.8	359.1	325.6	285.7	272.9
62.5°	328.8	312.8	284.1	250.6	266.5
65°	282.5	266.5	241.0	245.8	204.3
67.5°	231.4	223.4	201.1	178.7	172.4
70°	188.3	178.7	170.8	146.8	140.4
72.5°	150.0	140.4	129.3	116.5	111.7
75°	113.3	105.3	98.9	94.2	103.7
77.5°	78.2	75.0	70.2	65.4	63.8
80°	51.1	49.5	47.9	46.3	44.7
82.5°	30.3	30.3	30.3	30.3	30.3
85°	16.0	17.6	19.2	20.7	22.3
87.5°	9.6	9.6	11.2	12.8	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)