

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: P562259

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562259
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-50-UNV-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2728.0 lumens
Efficiency: N/A
Efficacy: 116.6 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

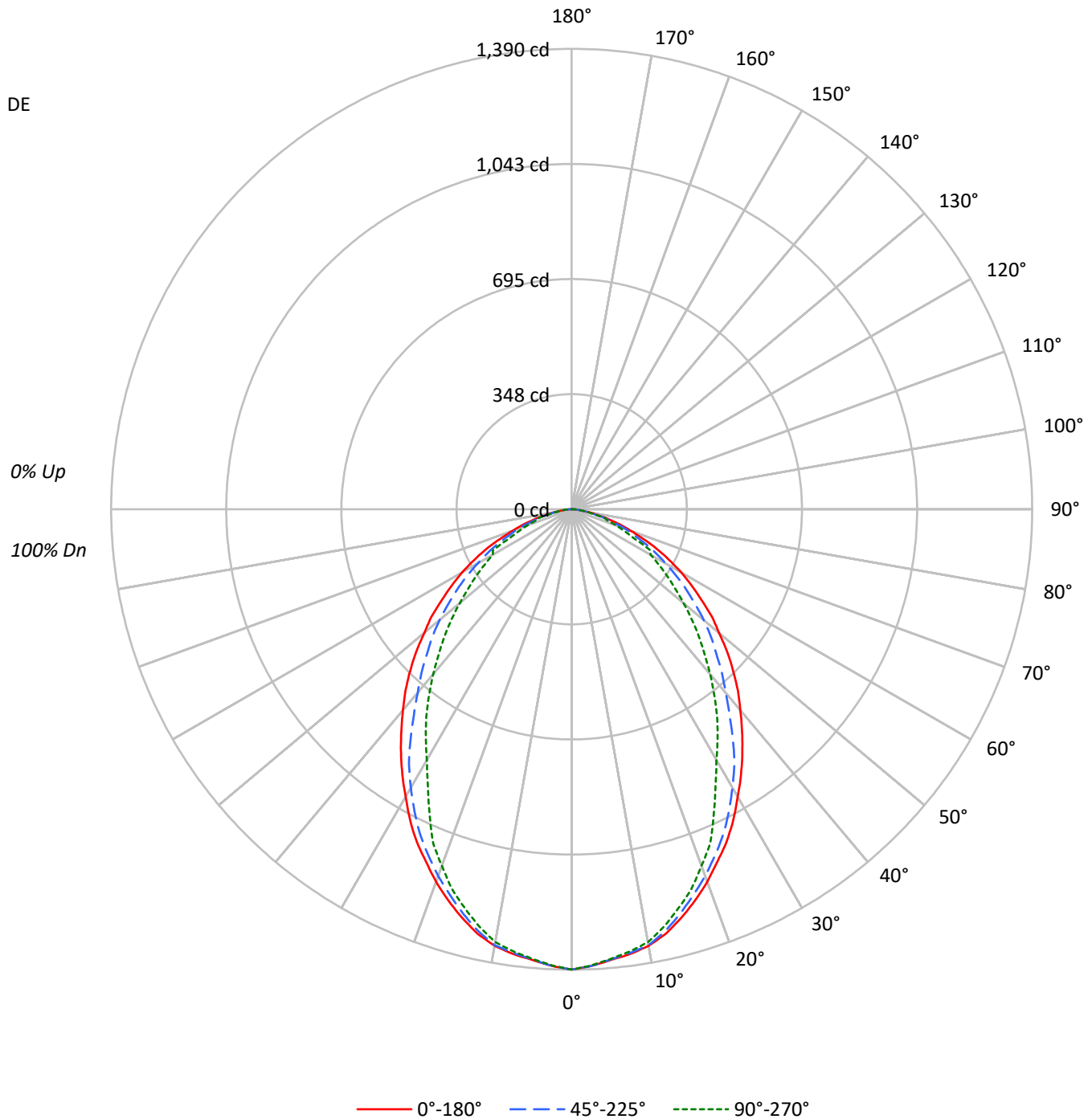
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1870	1870	1870
5°	1844	1842	1840
10°	1828	1826	1813
15°	1779	1761	1736
20°	1714	1686	1640
25°	1643	1608	1507
30°	1557	1507	1358
35°	1475	1393	1256
40°	1391	1270	1143
45°	1311	1174	1033
50°	1214	1090	921
55°	1123	987	825
60°	1029	882	739
65°	905	772	655
70°	746	676	556
75°	593	518	543
80°	398	373	349
85°	249	298	347

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1311 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.4	4.7
10°-20°	355.0	13.0
20°-30°	491.5	18.0
30°-40°	524.1	19.2
40°-50°	478.1	17.5
50°-60°	374.6	13.7
60°-70°	244.1	8.9
70°-80°	108.2	4.0
80°-90°	23.2	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°	975.8	35.8
0°-40°	1499.9	55.0
0°-60°	2352.5	86.2
0°-90°	2728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1390	1390	1390	1390	1390	
5°	1366	1364	1364	1362	1362	130
15°	1277	1277	1264	1251	1247	359
25°	1107	1100	1083	1044	1015	508
35°	898	892	848	784	765	561
45°	689	675	617	566	543	531
55°	479	464	421	371	352	429
65°	284	268	243	247	206	280
75°	114	106	100	95	104	122
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°	1389.6	1389.6	1389.6	1389.6	1389.6
2.5°	1380.0	1380.0	1380.0	1378.4	1378.4
5°	1365.5	1363.9	1363.9	1362.3	1362.3
7.5°	1354.3	1352.7	1351.1	1349.4	1346.2
10°	1338.2	1338.2	1336.6	1328.6	1327.0
12.5°	1312.5	1310.9	1304.5	1293.2	1290.0
15°	1277.2	1277.2	1264.3	1251.4	1246.6
17.5°	1238.6	1237.0	1220.9	1208.1	1201.6
20°	1196.8	1193.6	1177.6	1156.7	1145.4
22.5°	1150.2	1150.2	1131.0	1103.7	1092.4
25°	1106.9	1100.4	1082.8	1044.2	1015.3
27.5°	1057.1	1047.4	1028.1	973.5	939.8
30°	1002.4	997.6	970.3	899.6	873.9
32.5°	951.0	943.0	914.1	840.2	819.3
35°	898.0	891.6	848.2	784.0	764.7
37.5°	845.0	837.0	782.4	730.9	706.9
40°	792.0	782.4	722.9	676.3	650.6
42.5°	742.2	729.3	671.5	621.7	592.8
45°	689.2	674.7	616.9	565.5	543.0
47.5°	636.2	623.3	570.3	517.3	491.6
50°	579.9	568.7	520.5	467.5	440.2
52.5°	533.4	515.7	469.1	416.1	393.6
55°	478.7	464.3	420.9	371.1	351.8
57.5°	428.9	414.5	374.3	327.7	311.7
60°	382.3	361.5	327.7	287.6	274.7
62.5°	330.9	314.9	286.0	252.2	268.3
65°	284.3	268.3	242.6	247.4	205.6
67.5°	232.9	224.9	202.4	179.9	173.5
70°	189.6	179.9	171.9	147.8	141.4
72.5°	151.0	141.4	130.1	117.3	112.5
75°	114.1	106.0	99.6	94.8	104.4
77.5°	78.7	75.5	70.7	65.9	64.3
80°	51.4	49.8	48.2	46.6	45.0
82.5°	30.5	30.5	30.5	30.5	30.5
85°	16.1	17.7	19.3	20.9	22.5
87.5°	9.6	9.6	11.2	12.9	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)