

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: P561203

Luminaire Tested: FSR-12-4-LD4-1STD-40-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561203
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-12-4-LD4-1STD-40-UNV-80-85-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3288.0 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

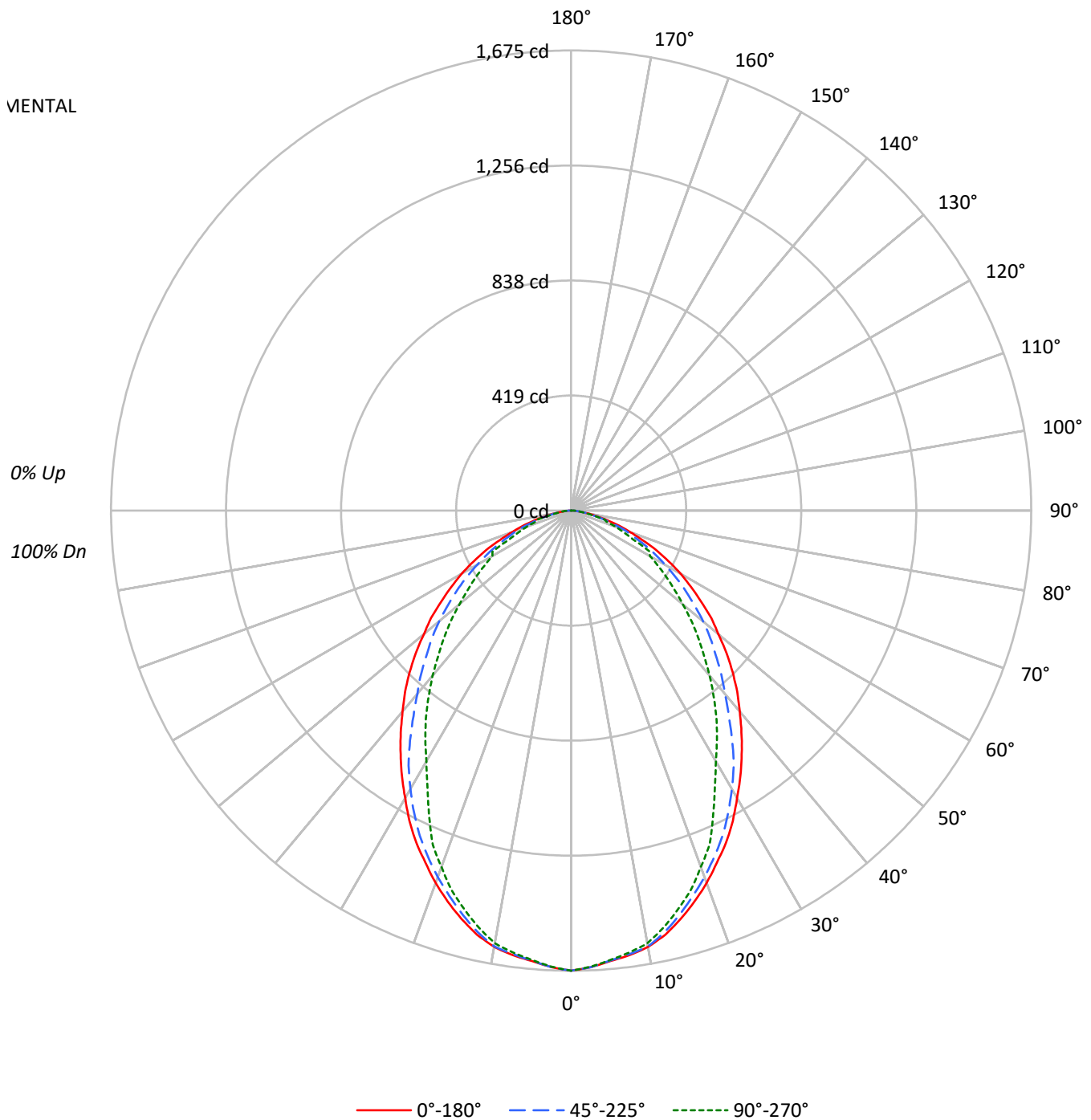
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4507	4507	4507
5°	4446	4441	4435
10°	4407	4402	4370
15°	4288	4245	4186
20°	4131	4064	3954
25°	3961	3875	3633
30°	3754	3634	3273
35°	3556	3358	3028
40°	3353	3061	2755
45°	3161	2829	2491
50°	2926	2626	2221
55°	2707	2380	1989
60°	2480	2126	1782
65°	2182	1862	1578
70°	1798	1630	1341
75°	1430	1248	1309
80°	961	900	840
85°	599	716	837

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3161 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.9	4.7
10°-20°	427.9	13.0
20°-30°	592.4	18.0
30°-40°	631.6	19.2
40°-50°	576.2	17.5
50°-60°	451.4	13.7
60°-70°	294.2	8.9
70°-80°	130.3	4.0
80°-90°	28.0	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°	1176.1	35.8
0°-40°	1807.8	55.0
0°-60°	2835.5	86.2
0°-90°	3288.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3288.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1675	1675	1675	1675	1675	
5°	1646	1644	1644	1642	1642	156
15°	1539	1539	1524	1508	1502	433
25°	1334	1326	1305	1259	1224	612
35°	1082	1075	1022	945	922	677
45°	831	813	744	682	654	640
55°	577	560	507	447	424	518
65°	343	323	292	298	248	338
75°	138	128	120	114	126	147
85°	19	21	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1674.9	1674.9	1674.9	1674.9	1674.9
2.5°	1663.2	1663.2	1663.2	1661.3	1661.3
5°	1645.8	1643.9	1643.9	1641.9	1641.9
7.5°	1632.3	1630.3	1628.4	1626.5	1622.6
10°	1612.9	1612.9	1611.0	1601.3	1599.3
12.5°	1581.9	1580.0	1572.2	1558.7	1554.8
15°	1539.3	1539.3	1523.8	1508.3	1502.5
17.5°	1492.9	1490.9	1471.6	1456.1	1448.3
20°	1442.5	1438.6	1419.3	1394.1	1380.6
22.5°	1386.4	1386.4	1363.1	1330.2	1316.7
25°	1334.1	1326.3	1305.0	1258.6	1223.7
27.5°	1274.1	1262.4	1239.2	1173.4	1132.7
30°	1208.2	1202.4	1169.5	1084.3	1053.3
32.5°	1146.3	1136.6	1101.7	1012.7	987.5
35°	1082.4	1074.6	1022.3	944.9	921.7
37.5°	1018.5	1008.8	943.0	881.0	852.0
40°	954.6	943.0	871.3	815.2	784.2
42.5°	894.6	879.1	809.4	749.3	714.5
45°	830.7	813.2	743.5	681.6	654.5
47.5°	766.8	751.3	687.4	623.5	592.5
50°	699.0	685.4	627.3	563.5	530.5
52.5°	642.8	621.5	565.4	501.5	474.4
55°	577.0	559.6	507.3	447.3	424.0
57.5°	517.0	499.6	451.1	395.0	375.6
60°	460.8	435.7	395.0	346.6	331.1
62.5°	398.9	379.5	344.7	304.0	323.4
65°	342.7	323.4	292.4	298.2	247.8
67.5°	280.8	271.1	244.0	216.9	209.1
70°	228.5	216.9	207.2	178.1	170.4
72.5°	182.0	170.4	156.8	141.3	135.5
75°	137.5	127.8	120.0	114.2	125.9
77.5°	94.9	91.0	85.2	79.4	77.5
80°	62.0	60.0	58.1	56.2	54.2
82.5°	36.8	36.8	36.8	36.8	36.8
85°	19.4	21.3	23.2	25.2	27.1
87.5°	11.6	11.6	13.6	15.5	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)