

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: P562359

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562359
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-LD4-1STD-40-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3696.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

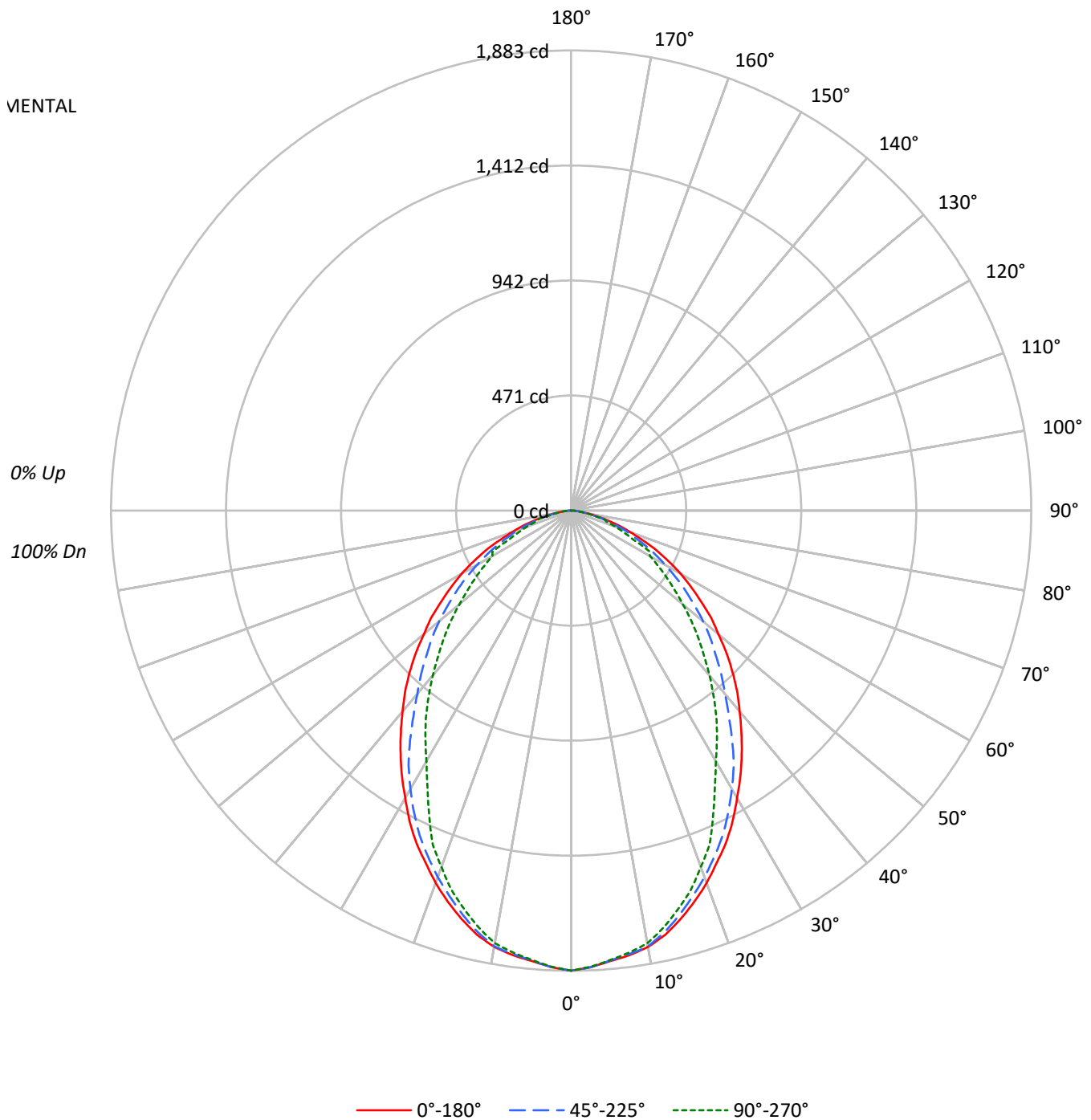
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	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°	2533	2533	2533
5°	2499	2496	2493
10°	2477	2474	2456
15°	2410	2386	2353
20°	2322	2284	2222
25°	2226	2178	2042
30°	2110	2042	1840
35°	1998	1888	1702
40°	1885	1720	1548
45°	1777	1590	1400
50°	1645	1476	1248
55°	1521	1338	1118
60°	1394	1195	1002
65°	1226	1046	887
70°	1010	916	753
75°	803	701	736
80°	539	506	472
85°	337	403	471

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1777 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.3	4.7
10°-20°	481.0	13.0
20°-30°	665.9	18.0
30°-40°	710.0	19.2
40°-50°	647.7	17.5
50°-60°	507.4	13.7
60°-70°	330.7	8.9
70°-80°	146.5	4.0
80°-90°	31.5	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°	1322.1	35.8
0°-40°	2032.1	55.0
0°-60°	3187.3	86.2
0°-90°	3696.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3696.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1883	1883	1883	1883	1883	
5°	1850	1848	1848	1846	1846	176
15°	1730	1730	1713	1696	1689	486
25°	1500	1491	1467	1415	1376	688
35°	1217	1208	1149	1062	1036	761
45°	934	914	836	766	736	719
55°	649	629	570	503	477	582
65°	385	364	329	335	279	380
75°	154	144	135	128	142	166
85°	22	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1882.7	1882.7	1882.7	1882.7	1882.7
2.5°	1869.6	1869.6	1869.6	1867.5	1867.5
5°	1850.0	1847.9	1847.9	1845.7	1845.7
7.5°	1834.8	1832.6	1830.5	1828.3	1823.9
10°	1813.0	1813.0	1810.9	1800.0	1797.8
12.5°	1778.2	1776.0	1767.3	1752.1	1747.7
15°	1730.3	1730.3	1712.9	1695.5	1689.0
17.5°	1678.1	1675.9	1654.2	1636.7	1628.0
20°	1621.5	1617.2	1595.4	1567.1	1551.9
22.5°	1558.4	1558.4	1532.3	1495.3	1480.0
25°	1499.6	1490.9	1467.0	1414.7	1375.6
27.5°	1432.2	1419.1	1393.0	1319.0	1273.3
30°	1358.2	1351.6	1314.6	1218.9	1184.0
32.5°	1288.5	1277.6	1238.4	1138.3	1110.0
35°	1216.7	1208.0	1149.2	1062.1	1036.0
37.5°	1144.9	1134.0	1060.0	990.3	957.7
40°	1073.0	1060.0	979.4	916.3	881.5
42.5°	1005.6	988.1	909.8	842.3	803.1
45°	933.7	914.1	835.8	766.1	735.7
47.5°	861.9	844.5	772.7	700.8	666.0
50°	785.7	770.5	705.2	633.4	596.4
52.5°	722.6	698.7	635.5	563.7	533.2
55°	648.6	629.0	570.2	502.8	476.7
57.5°	581.1	561.5	507.1	444.0	422.2
60°	518.0	489.7	444.0	389.6	372.2
62.5°	448.4	426.6	387.4	341.7	363.5
65°	385.2	363.5	328.7	335.2	278.6
67.5°	315.6	304.7	274.2	243.8	235.1
70°	256.8	243.8	232.9	200.2	191.5
72.5°	204.6	191.5	176.3	158.9	152.4
75°	154.5	143.7	134.9	128.4	141.5
77.5°	106.6	102.3	95.8	89.2	87.1
80°	69.6	67.5	65.3	63.1	60.9
82.5°	41.4	41.4	41.4	41.4	41.4
85°	21.8	23.9	26.1	28.3	30.5
87.5°	13.1	13.1	15.2	17.4	19.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)