

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: P590136

Luminaire Tested: FSR-24-2-LD4-2HI-35-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590136
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-LD4-2HI-35-UNV-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4488.0 lumens
Efficiency: N/A
Efficacy: 103.9 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

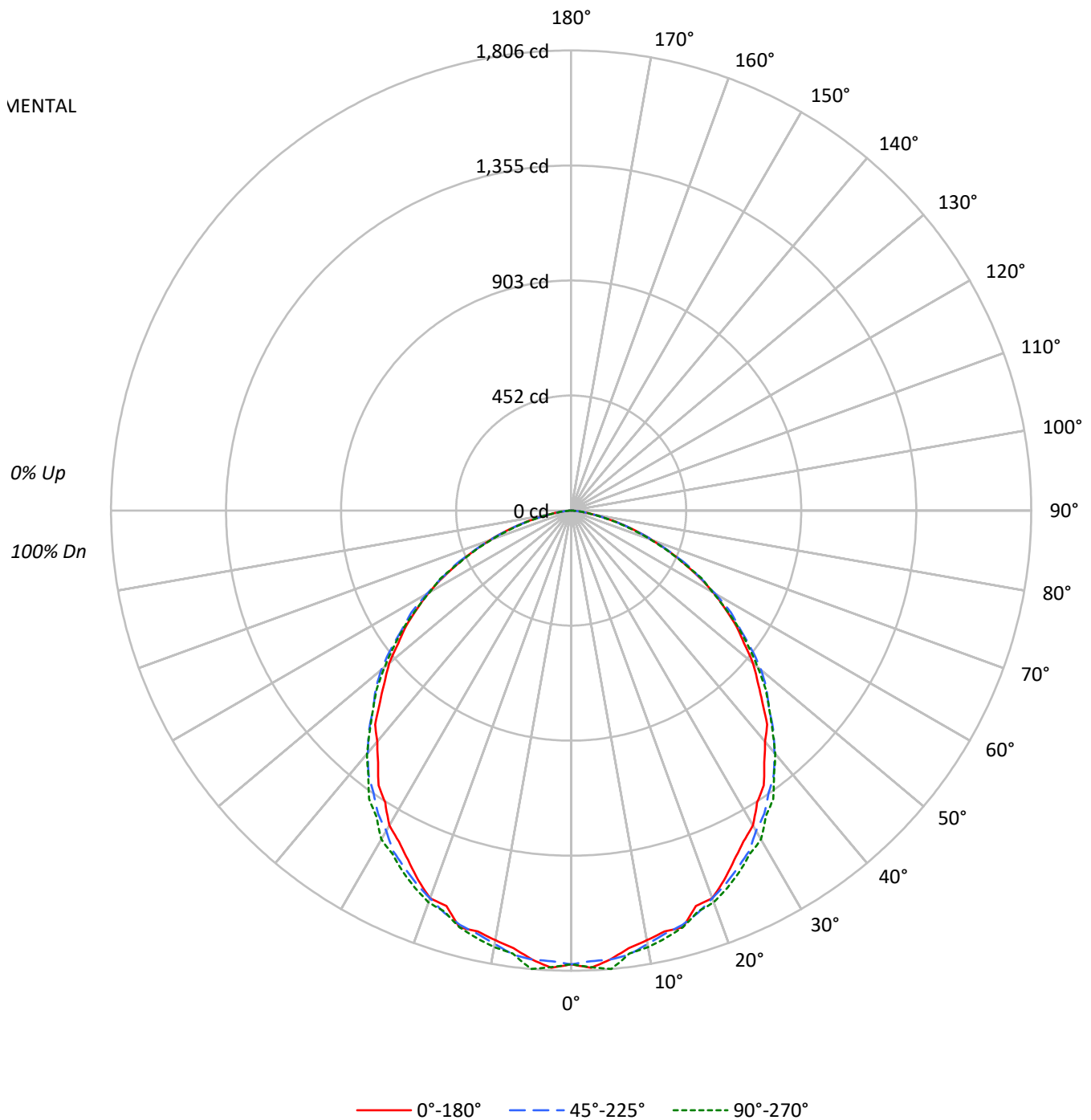
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4792	4792	4792
5°	4776	4778	4878
10°	4679	4720	4753
15°	4716	4691	4717
20°	4637	4637	4686
25°	4494	4592	4643
30°	4432	4510	4630
35°	4328	4441	4541
40°	4160	4360	4379
45°	4034	4177	4183
50°	3901	4077	3999
55°	3717	3789	3763
60°	3476	3511	3448
65°	3099	3179	3077
70°	2659	2668	2594
75°	2106	2101	2020
80°	1410	1371	1319
85°	766	760	710

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4285 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.5	3.7
10°-20°	474.7	10.6
20°-30°	711.2	15.8
30°-40°	843.0	18.8
40°-50°	844.5	18.8
50°-60°	716.9	16.0
60°-70°	483.3	10.8
70°-80°	212.4	4.7
80°-90°	34.5	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°	1353.5	30.2
0°-40°	2196.4	48.9
0°-60°	3757.8	83.7
0°-90°	4488.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4488.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1781	1781	1781	1781	1781	
5°	1768	1764	1769	1764	1806	167
15°	1693	1673	1684	1692	1693	472
25°	1514	1522	1547	1567	1564	700
35°	1317	1321	1352	1383	1382	818
45°	1060	1080	1098	1126	1099	820
55°	792	787	808	802	802	705
65°	487	480	499	480	483	484
75°	203	198	202	188	194	217
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1780.7	1780.7	1780.7	1780.7	1780.7
2.5°	1796.1	1782.6	1769.9	1784.6	1793.6
5°	1768.1	1763.9	1768.8	1763.5	1806.0
7.5°	1731.8	1747.6	1756.8	1751.1	1753.6
10°	1712.4	1706.9	1727.4	1741.6	1739.6
12.5°	1691.7	1700.0	1701.2	1716.6	1718.0
15°	1692.9	1673.4	1683.7	1692.4	1693.1
17.5°	1627.1	1648.3	1655.4	1675.4	1650.6
20°	1619.1	1603.7	1619.1	1639.6	1636.3
22.5°	1569.7	1552.4	1585.5	1603.7	1602.5
25°	1513.6	1521.8	1546.7	1566.9	1563.7
27.5°	1464.4	1474.0	1509.4	1537.2	1519.3
30°	1426.4	1421.6	1451.5	1476.3	1490.1
32.5°	1358.6	1376.1	1411.0	1435.6	1422.5
35°	1317.4	1321.3	1351.9	1383.2	1382.3
37.5°	1245.5	1263.6	1306.6	1315.4	1307.3
40°	1184.1	1202.2	1241.1	1250.5	1246.6
42.5°	1138.8	1142.0	1175.3	1186.2	1168.9
45°	1059.9	1079.7	1097.6	1125.9	1099.2
47.5°	992.8	1002.0	1040.6	1048.2	1034.2
50°	931.9	935.1	973.9	964.5	955.3
52.5°	855.3	868.9	890.7	888.9	878.1
55°	792.3	787.0	807.7	802.2	802.0
57.5°	716.7	725.9	742.9	734.1	720.1
60°	645.8	646.1	652.3	642.4	640.6
62.5°	567.0	569.7	571.1	558.9	578.7
65°	486.7	480.3	499.2	480.1	483.3
67.5°	412.9	416.2	414.3	402.4	407.0
70°	338.0	342.1	339.1	325.6	329.7
72.5°	269.5	264.4	267.6	250.6	258.4
75°	202.6	198.4	202.1	187.8	194.3
77.5°	138.0	141.2	138.9	131.3	135.7
80°	91.0	88.5	88.5	84.2	85.1
82.5°	53.1	50.6	49.9	48.5	50.6
85°	24.8	24.1	24.6	23.9	23.0
87.5°	9.0	9.2	9.2	8.7	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)