

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: P590589

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590589
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-LD4-3LO-50-UNV-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4265.0 lumens
Efficiency: N/A
Efficacy: 121.5 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

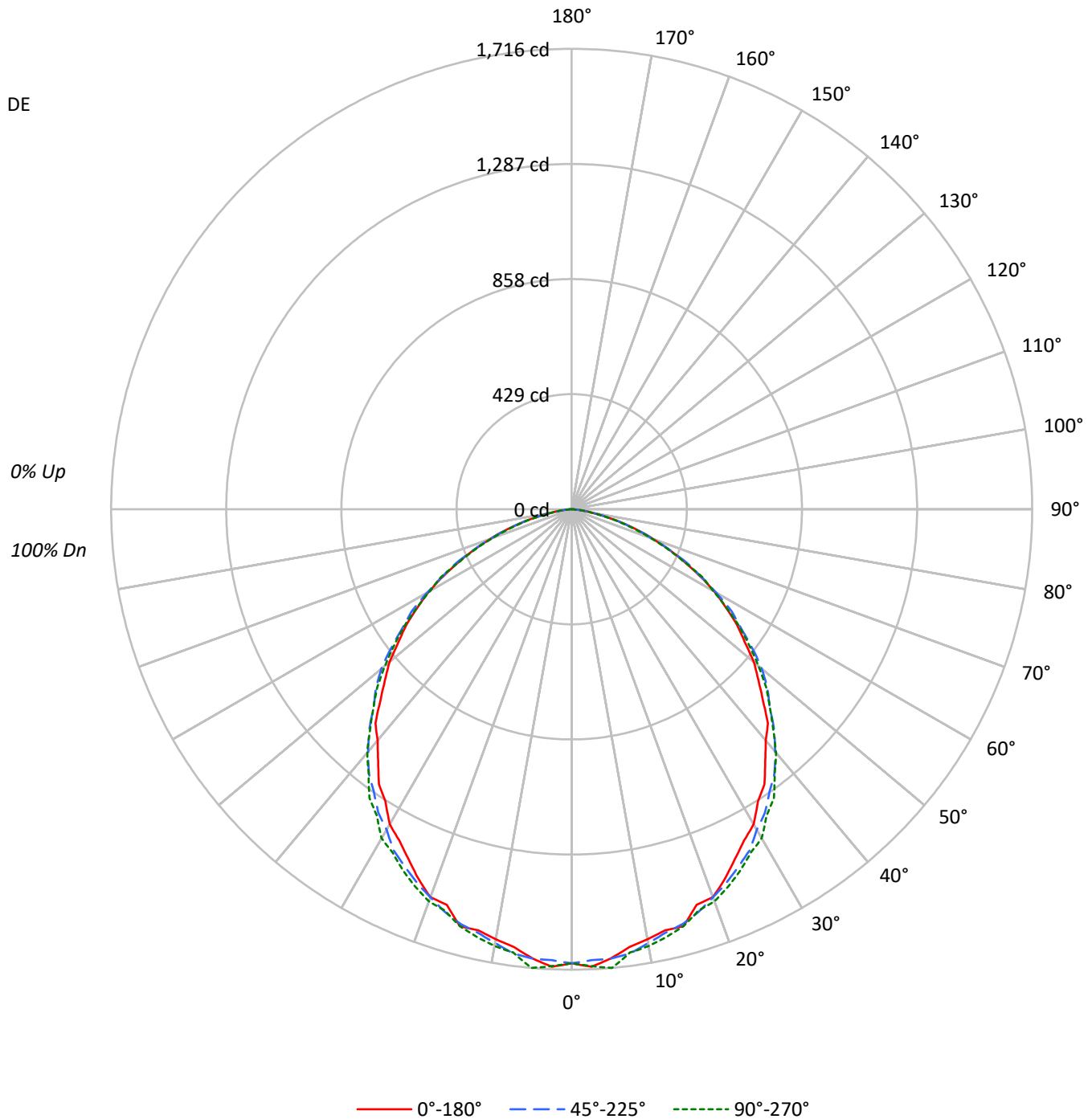
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4554	4554	4554
5°	4539	4541	4636
10°	4447	4486	4517
15°	4482	4457	4483
20°	4406	4406	4453
25°	4271	4364	4412
30°	4212	4286	4400
35°	4113	4221	4315
40°	3953	4143	4162
45°	3833	3970	3975
50°	3707	3875	3800
55°	3532	3601	3575
60°	3303	3336	3276
65°	2946	3021	2925
70°	2527	2536	2465
75°	2001	1997	1919
80°	1340	1303	1252
85°	729	722	673

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4072 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.2	3.7
10°-20°	451.1	10.6
20°-30°	675.9	15.8
30°-40°	801.1	18.8
40°-50°	802.6	18.8
50°-60°	681.2	16.0
60°-70°	459.3	10.8
70°-80°	201.8	4.7
80°-90°	32.8	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°	1286.2	30.2
0°-40°	2087.3	48.9
0°-60°	3571.1	83.7
0°-90°	4265.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4265.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1692	1692	1692	1692	1692	
5°	1680	1676	1681	1676	1716	158
15°	1609	1590	1600	1608	1609	448
25°	1438	1446	1470	1489	1486	665
35°	1252	1256	1285	1314	1314	777
45°	1007	1026	1043	1070	1045	779
55°	753	748	768	762	762	670
65°	463	456	474	456	459	460
75°	192	189	192	178	185	206
85°	24	23	23	23	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1692.2	1692.2	1692.2	1692.2	1692.2
2.5°	1706.9	1694.0	1682.0	1696.0	1704.5
5°	1680.2	1676.3	1680.9	1675.9	1716.3
7.5°	1645.7	1660.8	1669.5	1664.1	1666.5
10°	1627.4	1622.1	1641.6	1655.1	1653.1
12.5°	1607.7	1615.6	1616.6	1631.3	1632.6
15°	1608.8	1590.2	1600.0	1608.3	1609.0
17.5°	1546.3	1566.4	1573.2	1592.2	1568.6
20°	1538.6	1524.0	1538.6	1558.1	1555.0
22.5°	1491.7	1475.3	1506.7	1524.0	1522.9
25°	1438.4	1446.2	1469.8	1489.0	1486.0
27.5°	1391.6	1400.8	1434.4	1460.9	1443.8
30°	1355.5	1351.0	1379.4	1403.0	1416.1
32.5°	1291.1	1307.7	1340.9	1364.3	1351.8
35°	1252.0	1255.7	1284.8	1314.5	1313.6
37.5°	1183.6	1200.8	1241.7	1250.0	1242.4
40°	1125.2	1142.5	1179.4	1188.4	1184.7
42.5°	1082.2	1085.3	1116.9	1127.2	1110.8
45°	1007.3	1026.1	1043.1	1070.0	1044.6
47.5°	943.5	952.2	988.9	996.1	982.8
50°	885.6	888.6	925.5	916.6	907.8
52.5°	812.8	825.7	846.4	844.7	834.4
55°	752.9	747.9	767.6	762.3	762.1
57.5°	681.0	689.8	706.0	697.7	684.3
60°	613.8	614.0	619.9	610.5	608.7
62.5°	538.8	541.4	542.7	531.2	550.0
65°	462.6	456.4	474.4	456.2	459.3
67.5°	392.4	395.5	393.7	382.4	386.7
70°	321.2	325.1	322.3	309.4	313.3
72.5°	256.1	251.3	254.3	238.2	245.6
75°	192.5	188.6	192.1	178.5	184.6
77.5°	131.1	134.2	132.0	124.8	128.9
80°	86.5	84.1	84.1	80.0	80.8
82.5°	50.5	48.1	47.4	46.1	48.1
85°	23.6	22.9	23.4	22.7	21.8
87.5°	8.5	8.7	8.7	8.3	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)