

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: P562470

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562470
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-50-UNV-93-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3276.0 lumens
Efficiency: N/A
Efficacy: 98.4 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

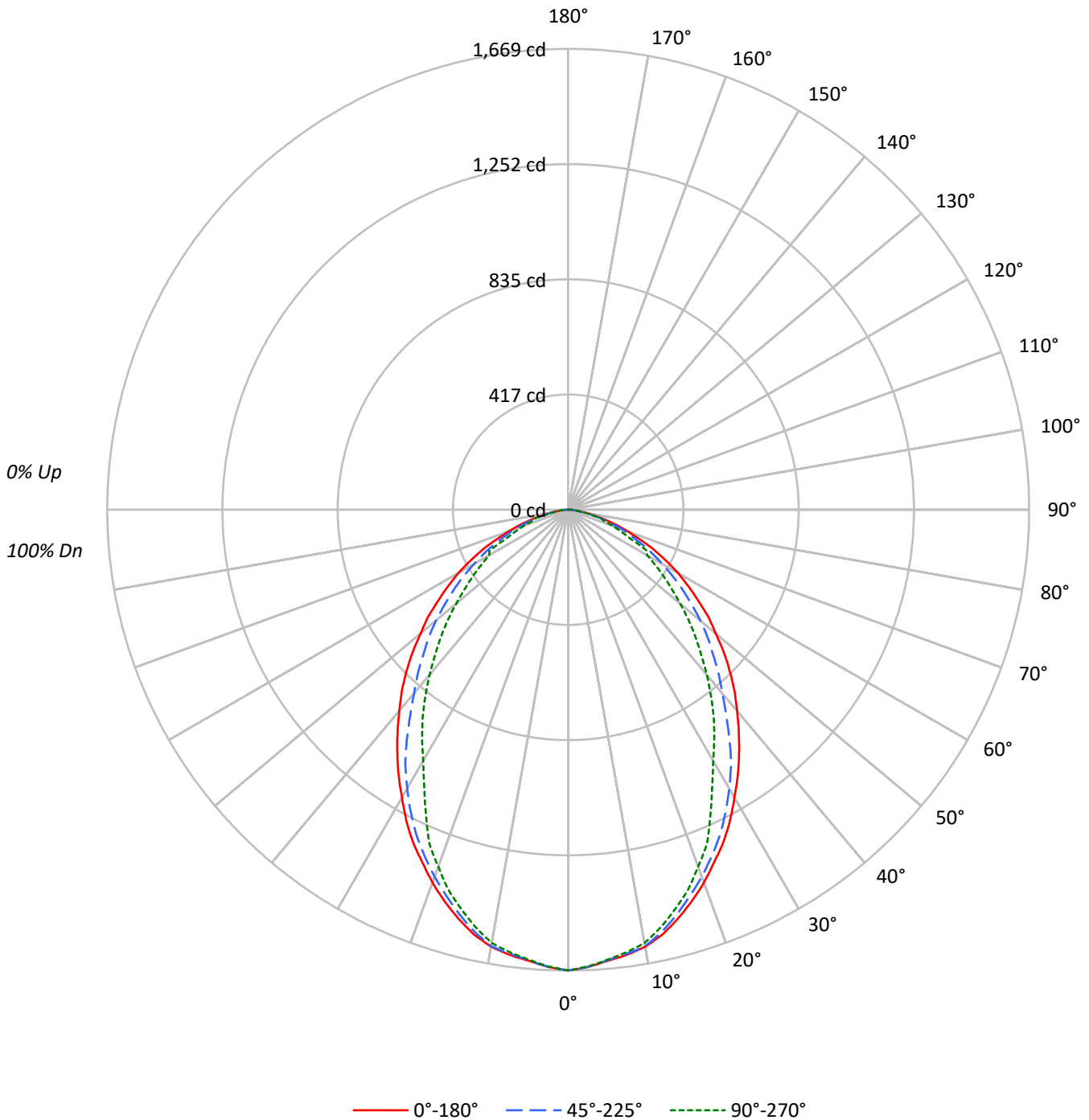
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2245	2245	2245
5°	2215	2212	2210
10°	2196	2193	2177
15°	2136	2115	2085
20°	2058	2025	1969
25°	1973	1930	1810
30°	1870	1810	1631
35°	1771	1673	1508
40°	1671	1525	1372
45°	1575	1410	1241
50°	1458	1308	1106
55°	1349	1186	991
60°	1235	1059	888
65°	1087	927	786
70°	895	812	668
75°	712	622	652
80°	478	449	418
85°	298	358	417

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1575 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.3	4.7
10°-20°	426.3	13.0
20°-30°	590.2	18.0
30°-40°	629.3	19.2
40°-50°	574.1	17.5
50°-60°	449.8	13.7
60°-70°	293.2	8.9
70°-80°	129.9	4.0
80°-90°	27.9	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°	1171.9	35.8
0°-40°	1801.2	55.0
0°-60°	2825.1	86.2
0°-90°	3276.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3276.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1669	1669	1669	1669	1669	
5°	1640	1638	1638	1636	1636	156
15°	1534	1534	1518	1503	1497	431
25°	1329	1322	1300	1254	1219	610
35°	1078	1071	1019	941	918	674
45°	828	810	741	679	652	638
55°	575	558	505	446	422	516
65°	342	322	291	297	247	337
75°	137	127	120	114	125	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°	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1657.2	1657.2	1657.2	1655.2	1655.2
5°	1639.8	1637.9	1637.9	1636.0	1636.0
7.5°	1626.3	1624.4	1622.5	1620.5	1616.7
10°	1607.0	1607.0	1605.1	1595.4	1593.5
12.5°	1576.1	1574.2	1566.5	1553.0	1549.1
15°	1533.7	1533.7	1518.3	1502.8	1497.1
17.5°	1487.4	1485.5	1466.2	1450.8	1443.0
20°	1437.2	1433.4	1414.1	1389.0	1375.5
22.5°	1381.3	1381.3	1358.2	1325.4	1311.9
25°	1329.2	1321.5	1300.3	1254.0	1219.2
27.5°	1269.4	1257.8	1234.7	1169.1	1128.6
30°	1203.8	1198.0	1165.2	1080.3	1049.5
32.5°	1142.1	1132.4	1097.7	1009.0	983.9
35°	1078.4	1070.7	1018.6	941.4	918.3
37.5°	1014.8	1005.1	939.5	877.8	848.8
40°	951.1	939.5	868.1	812.2	781.3
42.5°	891.3	875.9	806.4	746.6	711.9
45°	827.6	810.3	740.8	679.1	652.1
47.5°	764.0	748.5	684.9	621.2	590.3
50°	696.4	682.9	625.1	561.4	528.6
52.5°	640.5	619.3	563.3	499.7	472.7
55°	574.9	557.5	505.4	445.6	422.5
57.5°	515.1	497.7	449.5	393.6	374.3
60°	459.1	434.1	393.6	345.3	329.9
62.5°	397.4	378.1	343.4	302.9	322.2
65°	341.5	322.2	291.3	297.1	246.9
67.5°	279.7	270.1	243.1	216.1	208.4
70°	227.6	216.1	206.4	177.5	169.8
72.5°	181.3	169.8	156.3	140.8	135.0
75°	137.0	127.3	119.6	113.8	125.4
77.5°	94.5	90.7	84.9	79.1	77.2
80°	61.7	59.8	57.9	55.9	54.0
82.5°	36.7	36.7	36.7	36.7	36.7
85°	19.3	21.2	23.2	25.1	27.0
87.5°	11.6	11.6	13.5	15.4	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)