

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: P562932

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562932
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-LD4-2STD-40-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6419.0 lumens
Efficiency: N/A
Efficacy: 96.4 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

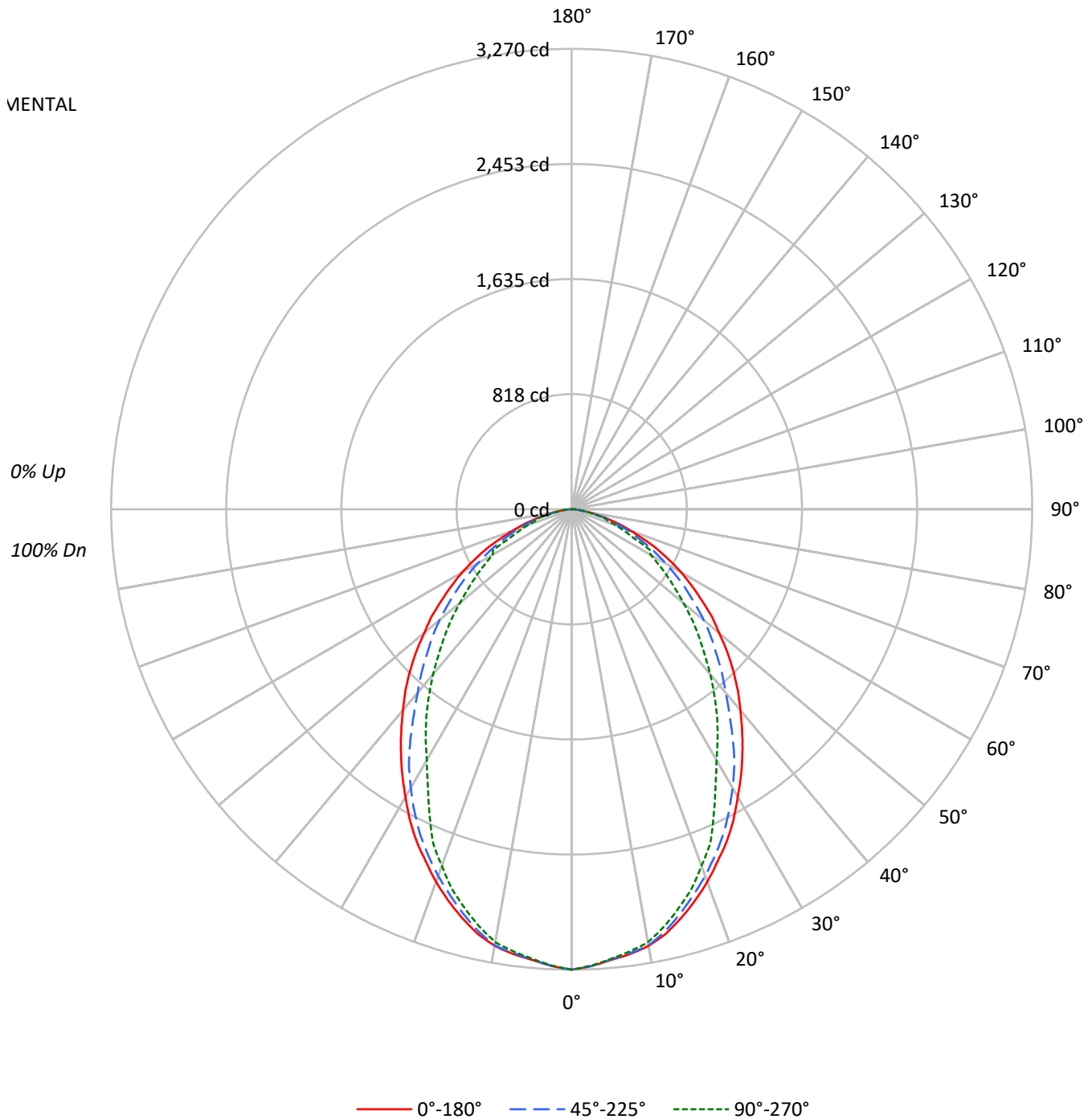
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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																			87									
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			75									
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			65									
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			56									
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			50									
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			44									
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			40									
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			36									
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			33									
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			30									

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4399	4399	4399
5°	4340	4335	4329
10°	4302	4297	4266
15°	4186	4144	4086
20°	4032	3967	3859
25°	3867	3782	3547
30°	3665	3547	3195
35°	3471	3278	2955
40°	3273	2988	2689
45°	3086	2762	2431
50°	2856	2564	2168
55°	2643	2323	1942
60°	2421	2075	1739
65°	2130	1817	1540
70°	1755	1591	1308
75°	1395	1219	1277
80°	938	879	820
85°	584	701	817

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3086 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.4	4.7
10°-20°	835.3	13.0
20°-30°	1156.4	18.0
30°-40°	1233.1	19.2
40°-50°	1124.9	17.5
50°-60°	881.3	13.7
60°-70°	574.4	8.9
70°-80°	254.5	4.0
80°-90°	54.6	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°	2296.1	35.8
0°-40°	3529.2	55.0
0°-60°	5535.5	86.2
0°-90°	6419.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6419.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3270	3270	3270	3270	3270	
5°	3213	3209	3209	3206	3206	305
15°	3005	3005	2975	2945	2933	845
25°	2604	2589	2548	2457	2389	1196
35°	2113	2098	1996	1845	1799	1321
45°	1622	1588	1452	1331	1278	1249
55°	1126	1092	990	873	828	1010
65°	669	631	571	582	484	659
75°	268	250	234	223	246	288
85°	38	42	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3269.8	3269.8	3269.8	3269.8	3269.8
2.5°	3247.1	3247.1	3247.1	3243.3	3243.3
5°	3213.1	3209.3	3209.3	3205.5	3205.5
7.5°	3186.6	3182.8	3179.0	3175.3	3167.7
10°	3148.8	3148.8	3145.0	3126.1	3122.3
12.5°	3088.3	3084.5	3069.4	3042.9	3035.4
15°	3005.1	3005.1	2974.9	2944.7	2933.3
17.5°	2914.4	2910.6	2872.8	2842.6	2827.5
20°	2816.1	2808.6	2770.8	2721.6	2695.2
22.5°	2706.5	2706.5	2661.2	2596.9	2570.4
25°	2604.5	2589.3	2547.8	2457.0	2389.0
27.5°	2487.3	2464.6	2419.2	2290.7	2211.3
30°	2358.8	2347.4	2283.2	2116.8	2056.4
32.5°	2237.8	2218.9	2150.9	1977.0	1927.8
35°	2113.1	2097.9	1995.9	1844.7	1799.3
37.5°	1988.3	1969.4	1840.9	1719.9	1663.2
40°	1863.6	1840.9	1701.0	1591.4	1530.9
42.5°	1746.4	1716.1	1580.1	1462.9	1394.8
45°	1621.6	1587.6	1451.5	1330.6	1277.7
47.5°	1496.9	1466.7	1341.9	1217.2	1156.7
50°	1364.6	1338.1	1224.7	1100.0	1035.7
52.5°	1255.0	1213.4	1103.8	979.0	926.1
55°	1126.5	1092.4	990.4	873.2	827.8
57.5°	1009.3	975.3	880.8	771.1	733.3
60°	899.7	850.5	771.1	676.6	646.4
62.5°	778.7	740.9	672.9	593.5	631.3
65°	669.1	631.3	570.8	582.1	483.8
67.5°	548.1	529.2	476.3	423.4	408.2
70°	446.0	423.4	404.5	347.8	332.6
72.5°	355.3	332.6	306.2	275.9	264.6
75°	268.4	249.5	234.4	223.0	245.7
77.5°	185.2	177.7	166.3	155.0	151.2
80°	121.0	117.2	113.4	109.6	105.8
82.5°	71.8	71.8	71.8	71.8	71.8
85°	37.8	41.6	45.4	49.1	52.9
87.5°	22.7	22.7	26.5	30.2	34.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)