

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P310902

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA08-W2A-U-5700K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P310902
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50-UNV-L82765-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5700K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4768.0 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

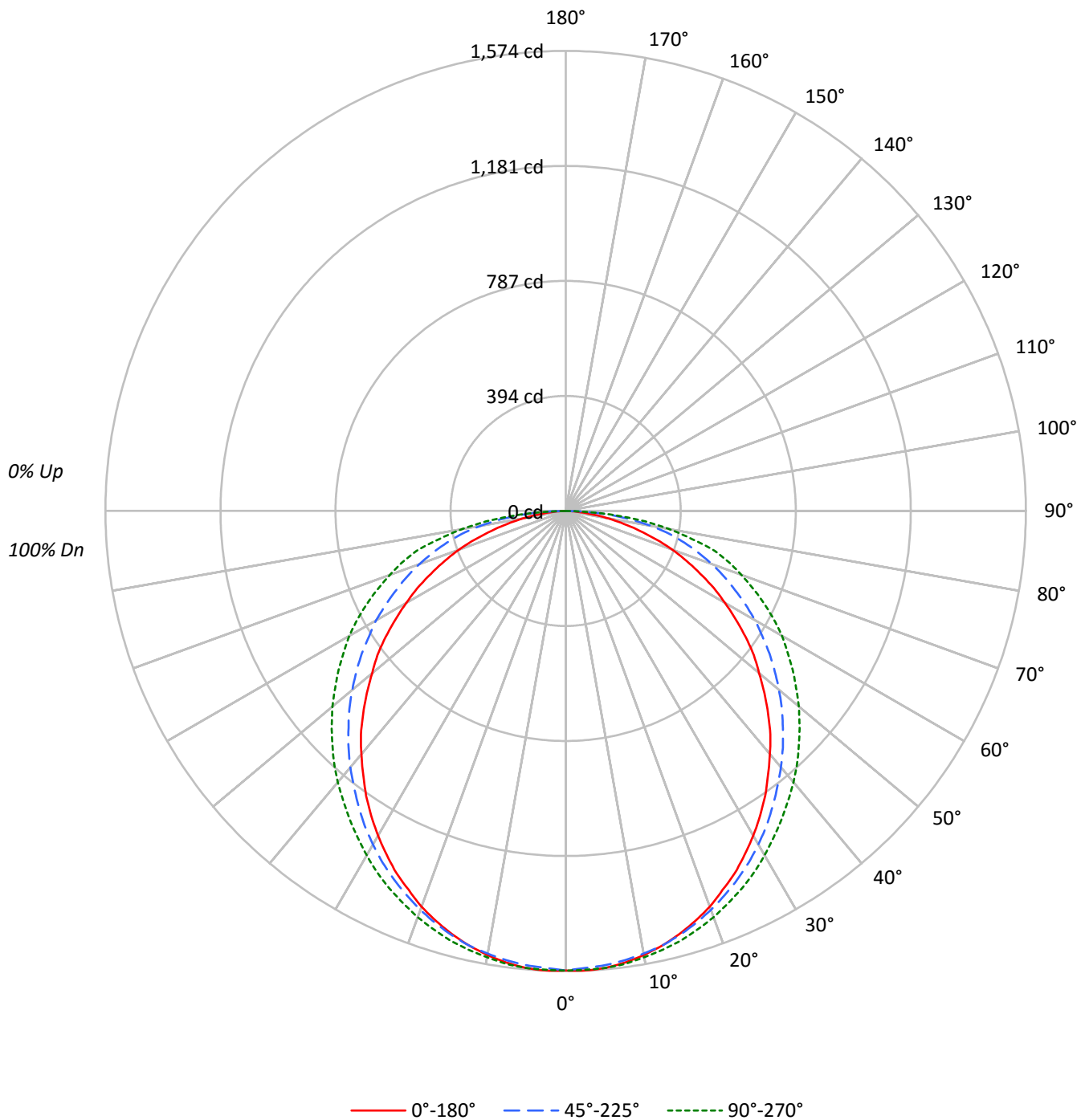
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2116	2116	2116
5°	2120	2107	2120
10°	2107	2101	2118
15°	2089	2093	2120
20°	2063	2079	2118
25°	2032	2064	2116
30°	1993	2047	2114
35°	1954	2027	2115
40°	1909	2012	2128
45°	1863	1999	2146
50°	1808	1993	2179
55°	1763	1997	2223
60°	1694	2014	2299
65°	1617	2035	2382
70°	1531	2097	2514
75°	1365	2188	2747
80°	1165	2317	2807
85°	831	2296	2686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.8	3.1
10°-20°	425.5	8.9
20°-30°	642.7	13.5
30°-40°	774.6	16.2
40°-50°	813.2	17.1
50°-60°	760.8	16.0
60°-70°	628.3	13.2
70°-80°	428.1	9.0
80°-90°	146.0	3.1
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°	1217.0	25.5
0°-40°	1991.6	41.8
0°-60°	3565.6	74.8
0°-90°	4768.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4768.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1572	1572	1572	1572	1572	
5°	1569	1568	1560	1569	1569	149
15°	1500	1501	1503	1519	1522	423
25°	1368	1375	1390	1417	1425	630
35°	1190	1202	1234	1275	1288	743
45°	979	1000	1050	1107	1128	755
55°	751	782	851	921	948	671
65°	508	550	639	720	748	504
75°	263	323	421	500	528	280
85°	54	106	149	168	174	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1572.4	1572.4	1572.4	1572.4	1572.4
2.5°	1574.0	1572.4	1564.5	1572.4	1570.9
5°	1569.3	1567.7	1559.8	1569.3	1569.3
7.5°	1558.2	1558.2	1550.3	1561.4	1563.0
10°	1542.4	1542.4	1537.6	1550.3	1550.3
12.5°	1523.4	1523.4	1523.4	1536.1	1537.6
15°	1499.7	1501.3	1502.8	1518.7	1521.8
17.5°	1471.2	1474.4	1479.1	1498.1	1501.3
20°	1441.1	1444.3	1452.2	1474.4	1479.1
22.5°	1403.2	1411.1	1422.2	1447.5	1452.2
25°	1368.4	1374.7	1390.5	1417.4	1425.3
27.5°	1325.7	1335.2	1355.7	1384.2	1395.3
30°	1283.0	1292.4	1317.8	1351.0	1360.5
32.5°	1237.1	1251.3	1278.2	1313.0	1324.1
35°	1189.6	1202.3	1233.9	1275.0	1287.7
37.5°	1137.4	1154.8	1189.6	1233.9	1249.7
40°	1086.8	1105.8	1145.3	1192.8	1211.8
42.5°	1036.2	1055.2	1099.4	1153.2	1172.2
45°	979.2	999.8	1050.4	1107.4	1127.9
47.5°	922.3	947.6	1002.9	1063.1	1085.2
50°	863.7	892.2	952.3	1015.6	1040.9
52.5°	811.5	838.4	901.7	969.7	993.5
55°	751.4	781.5	851.1	920.7	947.6
57.5°	689.7	722.9	797.3	873.2	900.1
60°	629.6	666.0	748.3	824.2	854.2
62.5°	571.1	607.5	692.9	772.0	802.0
65°	507.8	550.5	639.1	719.8	748.3
67.5°	447.7	493.6	586.9	666.0	694.5
70°	389.2	433.5	533.1	610.6	639.1
72.5°	325.9	376.5	476.2	556.8	586.9
75°	262.6	322.7	420.8	499.9	528.4
77.5°	204.1	265.8	363.8	428.7	442.9
80°	150.3	213.6	299.0	344.9	362.3
82.5°	96.5	159.8	227.8	261.0	275.3
85°	53.8	106.0	148.7	167.7	174.0
87.5°	22.1	45.9	60.1	68.0	68.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)