

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: P310936

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP250-W2A-U-5000K**

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: P310936
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 4370.0 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

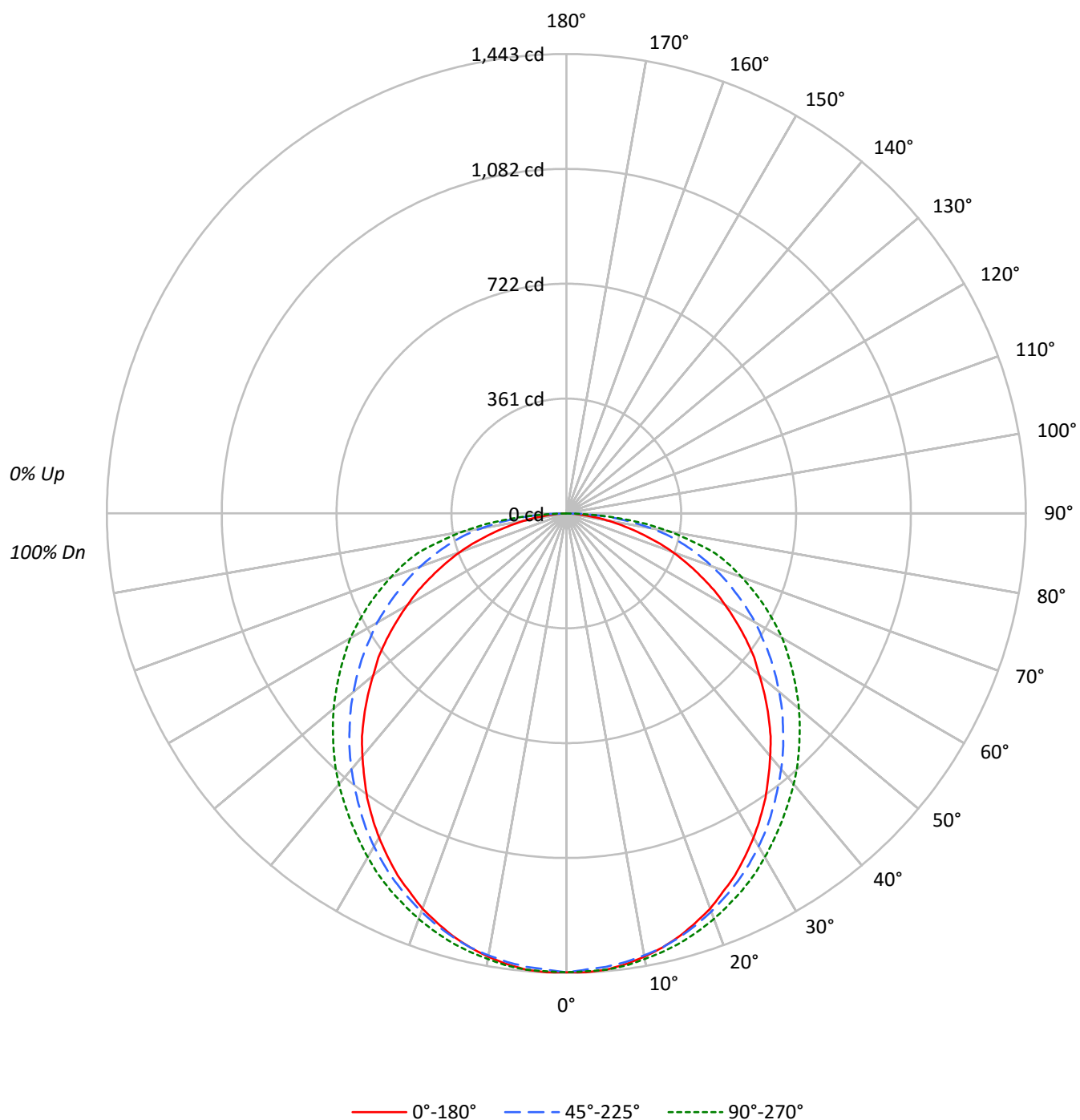
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1939	1939	1939
5°	1943	1931	1943
10°	1931	1925	1941
15°	1915	1919	1943
20°	1891	1906	1941
25°	1862	1892	1939
30°	1827	1876	1937
35°	1791	1858	1939
40°	1750	1844	1951
45°	1708	1832	1967
50°	1657	1827	1997
55°	1616	1830	2037
60°	1553	1845	2107
65°	1482	1865	2183
70°	1403	1922	2305
75°	1251	2005	2518
80°	1067	2123	2572
85°	761	2104	2462



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.4	3.1
10°-20°	390.0	8.9
20°-30°	589.1	13.5
30°-40°	709.9	16.2
40°-50°	745.3	17.1
50°-60°	697.3	16.0
60°-70°	575.8	13.2
70°-80°	392.4	9.0
80°-90°	133.8	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°	1115.4	25.5
0°-40°	1825.4	41.8
0°-60°	3268.0	74.8
0°-90°	4370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1441	1441	1441	1441	1441	
5°	1438	1437	1430	1438	1438	136
15°	1374	1376	1377	1392	1395	387
25°	1254	1260	1274	1299	1306	577
35°	1090	1102	1131	1169	1180	681
45°	898	916	963	1015	1034	692
55°	689	716	780	844	868	615
65°	465	505	586	660	686	462
75°	241	296	386	458	484	257
85°	49	97	136	154	160	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1441.2	1441.2	1441.2	1441.2	1441.2
2.5°	1442.6	1441.2	1433.9	1441.2	1439.7
5°	1438.3	1436.8	1429.6	1438.3	1438.3
7.5°	1428.1	1428.1	1420.9	1431.0	1432.5
10°	1413.6	1413.6	1409.3	1420.9	1420.9
12.5°	1396.2	1396.2	1396.2	1407.8	1409.3
15°	1374.5	1375.9	1377.4	1391.9	1394.8
17.5°	1348.4	1351.3	1355.6	1373.0	1375.9
20°	1320.8	1323.7	1331.0	1351.3	1355.6
22.5°	1286.1	1293.3	1303.4	1326.6	1331.0
25°	1254.2	1260.0	1274.5	1299.1	1306.3
27.5°	1215.0	1223.7	1242.6	1268.7	1278.8
30°	1175.9	1184.6	1207.8	1238.2	1246.9
32.5°	1133.8	1146.9	1171.5	1203.4	1213.6
35°	1090.3	1101.9	1130.9	1168.6	1180.2
37.5°	1042.5	1058.4	1090.3	1130.9	1145.4
40°	996.1	1013.5	1049.7	1093.2	1110.6
42.5°	949.7	967.1	1007.7	1057.0	1074.4
45°	897.5	916.3	962.7	1014.9	1033.8
47.5°	845.3	868.5	919.2	974.3	994.6
50°	791.6	817.7	872.8	930.8	954.0
52.5°	743.8	768.4	826.4	888.8	910.5
55°	688.7	716.2	780.0	843.8	868.5
57.5°	632.2	662.6	730.7	800.3	825.0
60°	577.1	610.4	685.8	755.4	782.9
62.5°	523.4	556.8	635.1	707.5	735.1
65°	465.4	504.6	585.8	659.7	685.8
67.5°	410.3	452.4	537.9	610.4	636.5
70°	356.7	397.3	488.6	559.7	585.8
72.5°	298.7	345.1	436.4	510.4	537.9
75°	240.7	295.8	385.7	458.2	484.3
77.5°	187.0	243.6	333.5	392.9	406.0
80°	137.7	195.7	274.0	316.1	332.0
82.5°	88.4	146.4	208.8	239.2	252.3
85°	49.3	97.1	136.3	153.7	159.5
87.5°	20.3	42.0	55.1	62.3	62.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)