

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: P314016

Luminaire Tested: **24FCZ2-50-UNV-L83050-CA08-W2A-U-3500K**

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: P314016
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-L83050-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 4573.0 lumens
Efficiency: N/A
Efficacy: 107.1 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

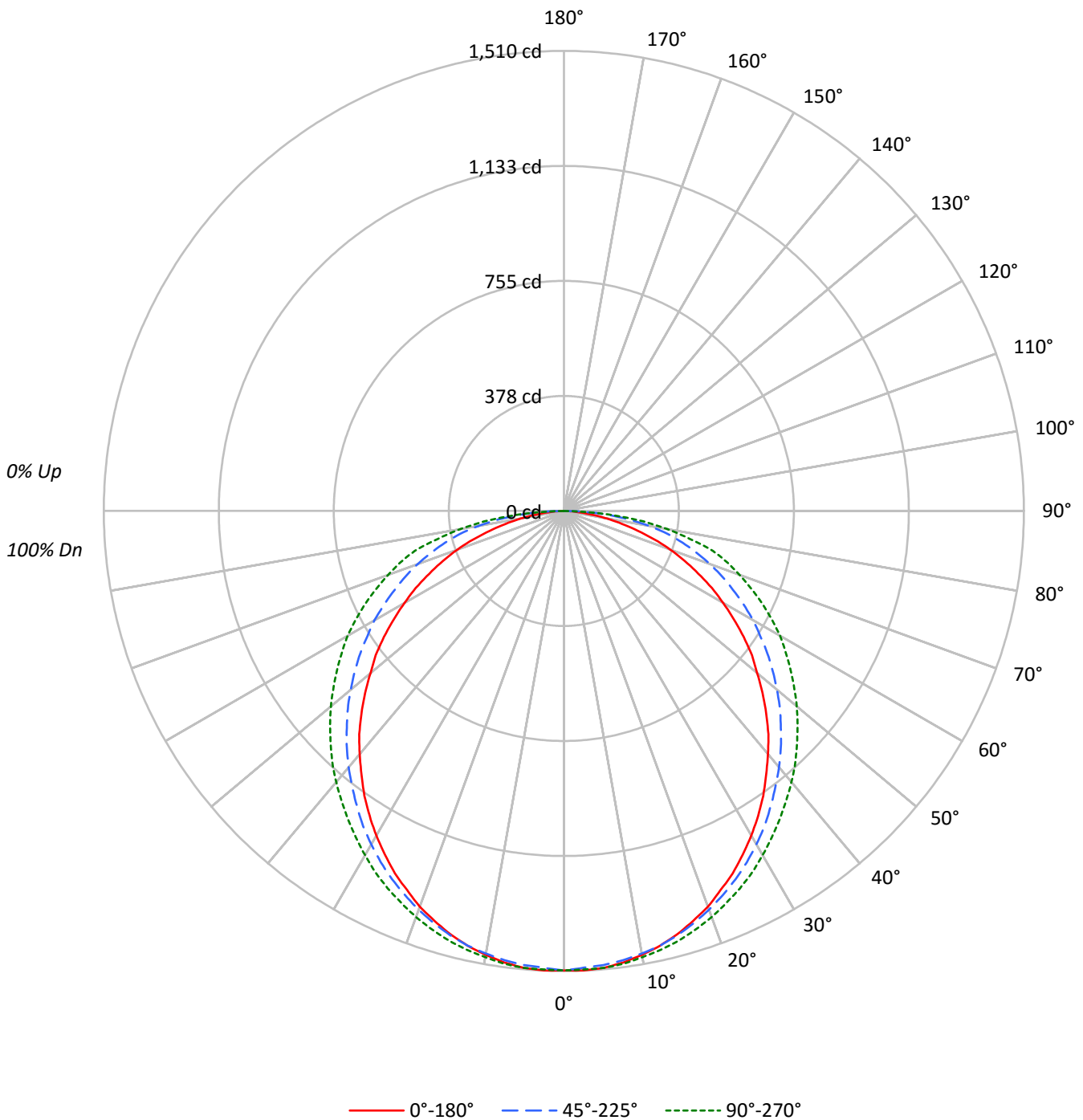
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2029	2029	2029
5°	2033	2021	2033
10°	2021	2015	2031
15°	2003	2008	2033
20°	1979	1994	2031
25°	1948	1980	2029
30°	1912	1964	2027
35°	1874	1944	2029
40°	1831	1929	2041
45°	1787	1917	2058
50°	1734	1912	2090
55°	1691	1915	2132
60°	1625	1931	2205
65°	1550	1952	2285
70°	1468	2011	2412
75°	1310	2098	2635
80°	1117	2222	2692
85°	797	2201	2577



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.7	3.1
10°-20°	408.1	8.9
20°-30°	616.4	13.5
30°-40°	742.9	16.2
40°-50°	779.9	17.1
50°-60°	729.7	16.0
60°-70°	602.6	13.2
70°-80°	410.6	9.0
80°-90°	140.0	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°	1167.3	25.5
0°-40°	1910.2	41.8
0°-60°	3419.8	74.8
0°-90°	4573.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4573.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1508	1508	1508	1508	1508	
5°	1505	1504	1496	1505	1505	143
15°	1438	1440	1441	1456	1460	405
25°	1312	1318	1334	1359	1367	604
35°	1141	1153	1183	1223	1235	713
45°	939	959	1007	1062	1082	724
55°	721	750	816	883	909	643
65°	487	528	613	690	718	483
75°	252	310	404	479	507	269
85°	52	102	143	161	167	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1508.1	1508.1	1508.1	1508.1	1508.1
2.5°	1509.7	1508.1	1500.5	1508.1	1506.6
5°	1505.1	1503.6	1496.0	1505.1	1505.1
7.5°	1494.5	1494.5	1486.9	1497.5	1499.0
10°	1479.3	1479.3	1474.8	1486.9	1486.9
12.5°	1461.1	1461.1	1461.1	1473.2	1474.8
15°	1438.3	1439.9	1441.4	1456.5	1459.6
17.5°	1411.0	1414.1	1418.6	1436.8	1439.9
20°	1382.2	1385.2	1392.8	1414.1	1418.6
22.5°	1345.8	1353.4	1364.0	1388.3	1392.8
25°	1312.4	1318.5	1333.7	1359.4	1367.0
27.5°	1271.4	1280.5	1300.3	1327.6	1338.2
30°	1230.5	1239.6	1263.9	1295.7	1304.8
32.5°	1186.5	1200.1	1225.9	1259.3	1269.9
35°	1141.0	1153.1	1183.4	1222.9	1235.0
37.5°	1090.9	1107.6	1141.0	1183.4	1198.6
40°	1042.3	1060.6	1098.5	1144.0	1162.2
42.5°	993.8	1012.0	1054.5	1106.1	1124.3
45°	939.2	958.9	1007.4	1062.1	1081.8
47.5°	884.6	908.8	961.9	1019.6	1040.8
50°	828.4	855.7	913.4	974.1	998.3
52.5°	778.3	804.1	864.8	930.1	952.8
55°	720.7	749.5	816.3	883.0	908.8
57.5°	661.5	693.4	764.7	837.5	863.3
60°	603.9	638.8	717.7	790.5	819.3
62.5°	547.7	582.6	664.6	740.4	769.2
65°	487.0	528.0	613.0	690.3	717.7
67.5°	429.4	473.4	562.9	638.8	666.1
70°	373.2	415.7	511.3	585.7	613.0
72.5°	312.6	361.1	456.7	534.1	562.9
75°	251.9	309.5	403.6	479.4	506.8
77.5°	195.7	254.9	349.0	411.2	424.8
80°	144.1	204.8	286.8	330.8	347.4
82.5°	92.6	153.2	218.5	250.3	264.0
85°	51.6	101.7	142.6	160.8	166.9
87.5°	21.2	44.0	57.7	65.2	65.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)