

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: P314004

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-CP125-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: P314004
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: 24FCZ2-50HE-UNV-L83050-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 4759.0 lumens
Efficiency: N/A
Efficacy: 118.1 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

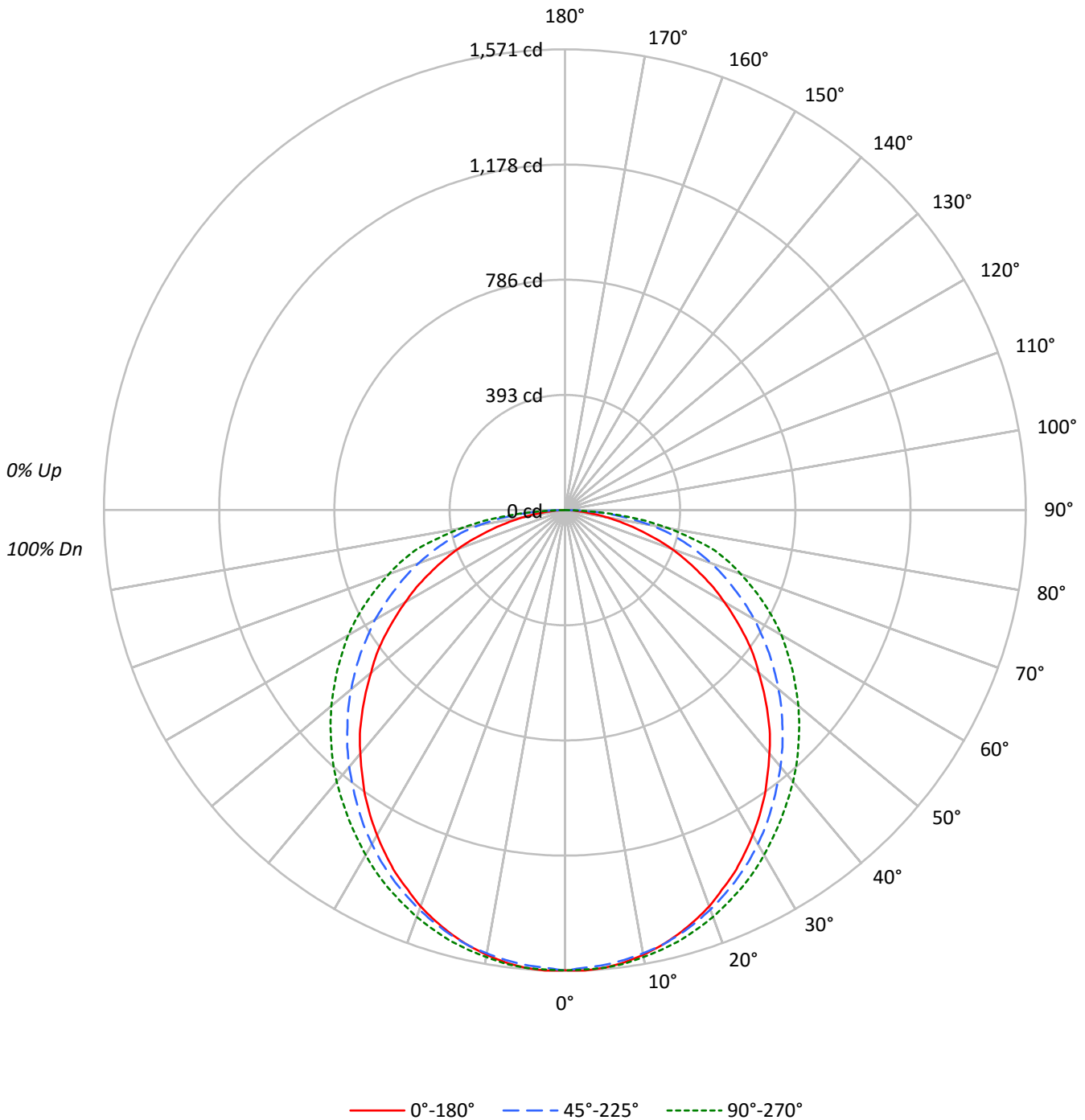
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2112	2112	2112
5°	2115	2103	2115
10°	2103	2097	2114
15°	2085	2089	2116
20°	2060	2075	2114
25°	2028	2060	2112
30°	1989	2043	2110
35°	1950	2023	2111
40°	1905	2008	2124
45°	1860	1995	2142
50°	1805	1990	2175
55°	1759	1993	2219
60°	1691	2010	2294
65°	1613	2031	2378
70°	1528	2093	2509
75°	1363	2183	2742
80°	1162	2312	2802
85°	829	2291	2682



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.5	3.1
10°-20°	424.7	8.9
20°-30°	641.5	13.5
30°-40°	773.1	16.2
40°-50°	811.7	17.1
50°-60°	759.3	16.0
60°-70°	627.1	13.2
70°-80°	427.3	9.0
80°-90°	145.7	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°	1214.7	25.5
0°-40°	1987.9	41.8
0°-60°	3558.9	74.8
0°-90°	4759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4759.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1570	1570	1570	1570	1570	
5°	1566	1565	1557	1566	1566	149
15°	1497	1498	1500	1516	1519	422
25°	1366	1372	1388	1415	1423	628
35°	1187	1200	1232	1273	1285	742
45°	977	998	1048	1105	1126	754
55°	750	780	850	919	946	669
65°	507	550	638	718	747	503
75°	262	322	420	499	527	279
85°	54	106	148	167	174	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1569.5	1569.5	1569.5	1569.5	1569.5
2.5°	1571.1	1569.5	1561.6	1569.5	1567.9
5°	1566.3	1564.7	1556.8	1566.3	1566.3
7.5°	1555.3	1555.3	1547.4	1558.4	1560.0
10°	1539.5	1539.5	1534.7	1547.4	1547.4
12.5°	1520.5	1520.5	1520.5	1533.2	1534.7
15°	1496.8	1498.4	1500.0	1515.8	1519.0
17.5°	1468.4	1471.6	1476.3	1495.3	1498.4
20°	1438.4	1441.6	1449.5	1471.6	1476.3
22.5°	1400.5	1408.4	1419.5	1444.7	1449.5
25°	1365.8	1372.1	1387.9	1414.7	1422.6
27.5°	1323.2	1332.6	1353.2	1381.6	1392.6
30°	1280.5	1290.0	1315.3	1348.4	1357.9
32.5°	1234.7	1248.9	1275.8	1310.5	1321.6
35°	1187.4	1200.0	1231.6	1272.6	1285.3
37.5°	1135.3	1152.6	1187.4	1231.6	1247.4
40°	1084.7	1103.7	1143.2	1190.5	1209.5
42.5°	1034.2	1053.2	1097.4	1151.1	1170.0
45°	977.4	997.9	1048.4	1105.3	1125.8
47.5°	920.5	945.8	1001.1	1061.1	1083.2
50°	862.1	890.5	950.5	1013.7	1038.9
52.5°	810.0	836.8	900.0	967.9	991.6
55°	750.0	780.0	849.5	918.9	945.8
57.5°	688.4	721.6	795.8	871.6	898.4
60°	628.4	664.7	746.8	822.6	852.6
62.5°	570.0	606.3	691.6	770.5	800.5
65°	506.8	549.5	637.9	718.4	746.8
67.5°	446.8	492.6	585.8	664.7	693.2
70°	388.4	432.6	532.1	609.5	637.9
72.5°	325.3	375.8	475.3	555.8	585.8
75°	262.1	322.1	420.0	498.9	527.4
77.5°	203.7	265.3	363.2	427.9	442.1
80°	150.0	213.2	298.4	344.2	361.6
82.5°	96.3	159.5	227.4	260.5	274.7
85°	53.7	105.8	148.4	167.4	173.7
87.5°	22.1	45.8	60.0	67.9	67.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)