

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: P314369

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-CA08-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: P314369
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 5118.0 lumens
Efficiency: N/A
Efficacy: 127.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

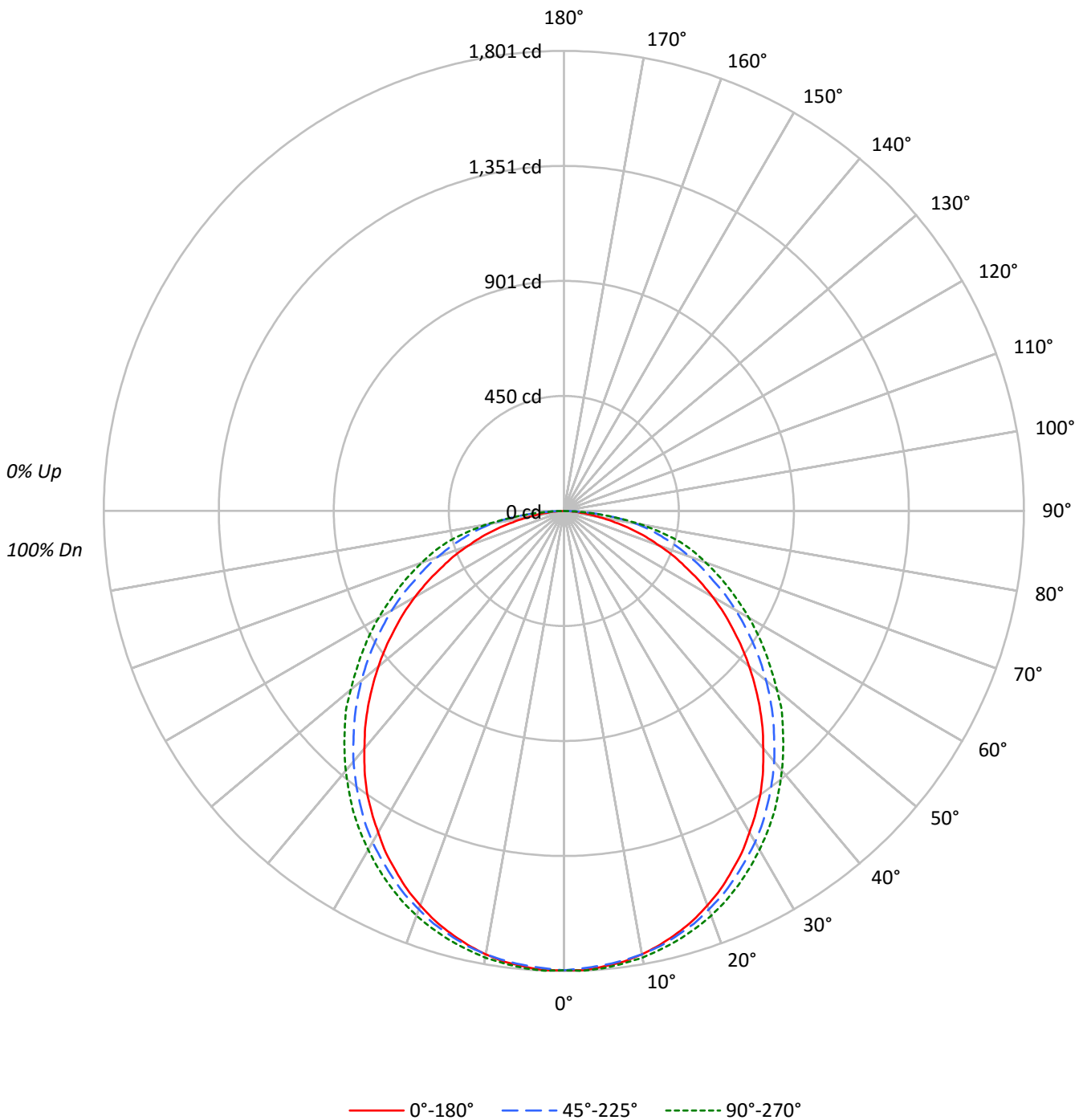
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2419	2419	2419
5°	2417	2411	2426
10°	2408	2408	2425
15°	2384	2396	2421
20°	2353	2377	2414
25°	2310	2353	2399
30°	2258	2326	2379
35°	2208	2288	2360
40°	2133	2250	2333
45°	2063	2206	2308
50°	1984	2164	2280
55°	1895	2124	2258
60°	1807	2091	2253
65°	1692	2055	2267
70°	1567	2066	2328
75°	1403	2104	2459
80°	1134	2229	2406
85°	854	1958	1908



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.2	3.3
10°-20°	486.4	9.5
20°-30°	731.1	14.3
30°-40°	870.9	17.0
40°-50°	891.3	17.4
50°-60°	802.4	15.7
60°-70°	630.2	12.3
70°-80°	409.0	8.0
80°-90°	126.5	2.5
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°	1387.7	27.1
0°-40°	2258.6	44.1
0°-60°	3952.3	77.2
0°-90°	5118.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5118.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1798	1798	1798	1798	1798	
5°	1790	1793	1785	1795	1796	170
15°	1712	1717	1720	1735	1738	483
25°	1556	1569	1585	1611	1616	717
35°	1344	1361	1393	1427	1437	839
45°	1084	1110	1159	1203	1213	836
55°	808	844	906	953	962	724
65°	532	572	645	699	712	529
75°	270	322	405	460	473	286
85°	55	102	127	124	124	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1798.0	1798.0	1798.0	1798.0	1798.0
2.5°	1799.6	1799.6	1791.5	1799.6	1801.2
5°	1789.9	1793.1	1785.0	1794.7	1796.4
7.5°	1780.1	1780.1	1775.2	1785.0	1786.6
10°	1762.2	1763.8	1762.2	1773.6	1775.2
12.5°	1739.5	1742.7	1744.3	1755.7	1757.3
15°	1711.8	1716.7	1720.0	1734.6	1737.8
17.5°	1680.9	1685.8	1693.9	1710.2	1713.5
20°	1643.5	1650.1	1659.8	1680.9	1685.8
22.5°	1602.9	1609.4	1625.7	1645.2	1653.3
25°	1555.8	1568.8	1585.0	1611.0	1615.9
27.5°	1508.6	1520.0	1541.1	1568.8	1575.3
30°	1453.3	1471.2	1497.2	1524.9	1531.4
32.5°	1399.7	1417.6	1448.5	1477.7	1485.9
35°	1344.4	1360.7	1393.2	1427.3	1437.1
37.5°	1281.0	1302.2	1337.9	1372.1	1381.8
40°	1214.4	1240.4	1281.0	1316.8	1328.2
42.5°	1151.0	1178.6	1219.2	1258.3	1271.3
45°	1084.3	1110.3	1159.1	1203.0	1212.7
47.5°	1016.0	1045.3	1097.3	1141.2	1157.5
50°	947.8	978.7	1033.9	1079.4	1089.2
52.5°	879.5	912.0	970.5	1019.3	1024.2
55°	808.0	843.7	905.5	952.6	962.4
57.5°	742.9	773.8	840.5	889.2	900.6
60°	671.4	705.5	777.1	822.6	837.2
62.5°	603.1	638.9	713.7	759.2	772.2
65°	531.6	572.2	645.4	699.0	712.0
67.5°	469.8	508.8	586.9	638.9	651.9
70°	398.3	442.2	525.1	578.7	591.7
72.5°	336.5	382.0	464.9	517.0	536.5
75°	269.9	321.9	404.8	460.1	473.1
77.5°	204.8	265.0	349.5	391.8	391.8
80°	146.3	209.7	287.7	307.3	310.5
82.5°	95.9	157.7	213.0	211.3	211.3
85°	55.3	102.4	126.8	123.6	123.6
87.5°	21.1	42.3	45.5	45.5	43.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)