

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: P311533

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CA08-W2A-U-6500K**

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: P311533
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-L82765-S-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 6500K 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: 5047.0 lumens
Efficiency: N/A
Efficacy: 125.9 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

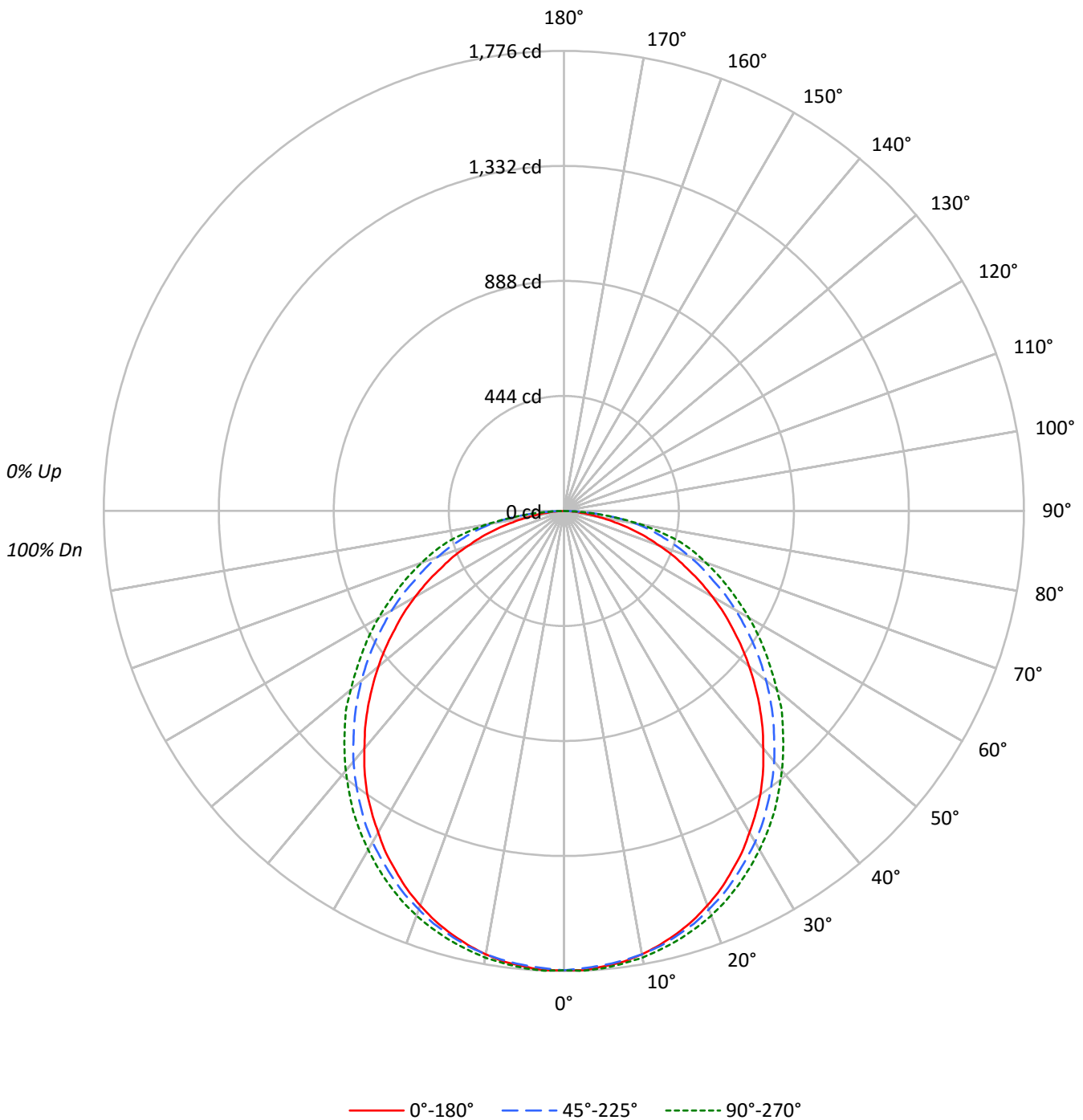
Input Watts (W): 40.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2386	2386	2386
5°	2384	2377	2393
10°	2374	2374	2392
15°	2351	2363	2387
20°	2321	2344	2380
25°	2278	2320	2366
30°	2227	2294	2346
35°	2178	2257	2328
40°	2103	2219	2300
45°	2035	2175	2276
50°	1956	2134	2248
55°	1869	2095	2226
60°	1782	2062	2222
65°	1669	2026	2236
70°	1545	2037	2295
75°	1383	2075	2425
80°	1118	2199	2373
85°	841	1930	1880



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.9	3.3
10°-20°	479.6	9.5
20°-30°	721.0	14.3
30°-40°	858.8	17.0
40°-50°	878.9	17.4
50°-60°	791.3	15.7
60°-70°	621.4	12.3
70°-80°	403.3	8.0
80°-90°	124.7	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°	1368.5	27.1
0°-40°	2227.3	44.1
0°-60°	3897.5	77.2
0°-90°	5047.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5047.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1773	1773	1773	1773	1773	
5°	1765	1768	1760	1770	1771	168
15°	1688	1693	1696	1710	1714	476
25°	1534	1547	1563	1589	1594	707
35°	1326	1342	1374	1408	1417	827
45°	1069	1095	1143	1186	1196	824
55°	797	832	893	939	949	714
65°	524	564	636	689	702	522
75°	266	317	399	454	466	282
85°	54	101	125	122	122	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1773.0	1773.0	1773.0	1773.0	1773.0
2.5°	1774.6	1774.6	1766.6	1774.6	1776.3
5°	1765.0	1768.2	1760.2	1769.8	1771.4
7.5°	1755.4	1755.4	1750.6	1760.2	1761.8
10°	1737.8	1739.4	1737.8	1749.0	1750.6
12.5°	1715.3	1718.5	1720.1	1731.4	1733.0
15°	1688.1	1692.9	1696.1	1710.5	1713.7
17.5°	1657.6	1662.4	1670.4	1686.5	1689.7
20°	1620.7	1627.2	1636.8	1657.6	1662.4
22.5°	1580.7	1587.1	1603.1	1622.4	1630.4
25°	1534.2	1547.0	1563.0	1588.7	1593.5
27.5°	1487.7	1498.9	1519.8	1547.0	1553.4
30°	1433.2	1450.8	1476.5	1503.7	1510.1
32.5°	1380.3	1397.9	1428.4	1457.2	1465.2
35°	1325.8	1341.8	1373.9	1407.5	1417.2
37.5°	1263.3	1284.1	1319.4	1353.0	1362.6
40°	1197.5	1223.2	1263.3	1298.5	1309.7
42.5°	1135.0	1162.3	1202.3	1240.8	1253.6
45°	1069.3	1094.9	1143.0	1186.3	1195.9
47.5°	1001.9	1030.8	1082.1	1125.4	1141.4
50°	934.6	965.1	1019.6	1064.5	1074.1
52.5°	867.3	899.3	957.1	1005.2	1010.0
55°	796.7	832.0	892.9	939.4	949.0
57.5°	732.6	763.1	828.8	876.9	888.1
60°	662.1	695.8	766.3	811.2	825.6
62.5°	594.8	630.0	703.8	748.7	761.5
65°	524.2	564.3	636.4	689.3	702.2
67.5°	463.3	501.8	578.7	630.0	642.8
70°	392.8	436.0	517.8	570.7	583.5
72.5°	331.8	376.7	458.5	509.8	529.0
75°	266.1	317.4	399.2	453.7	466.5
77.5°	202.0	261.3	344.7	386.4	386.4
80°	144.3	206.8	283.8	303.0	306.2
82.5°	94.6	155.5	210.0	208.4	208.4
85°	54.5	101.0	125.0	121.8	121.8
87.5°	20.8	41.7	44.9	44.9	43.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)