

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: P311550

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CP125-W2A-U-5700K**

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: P311550
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-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5700K 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

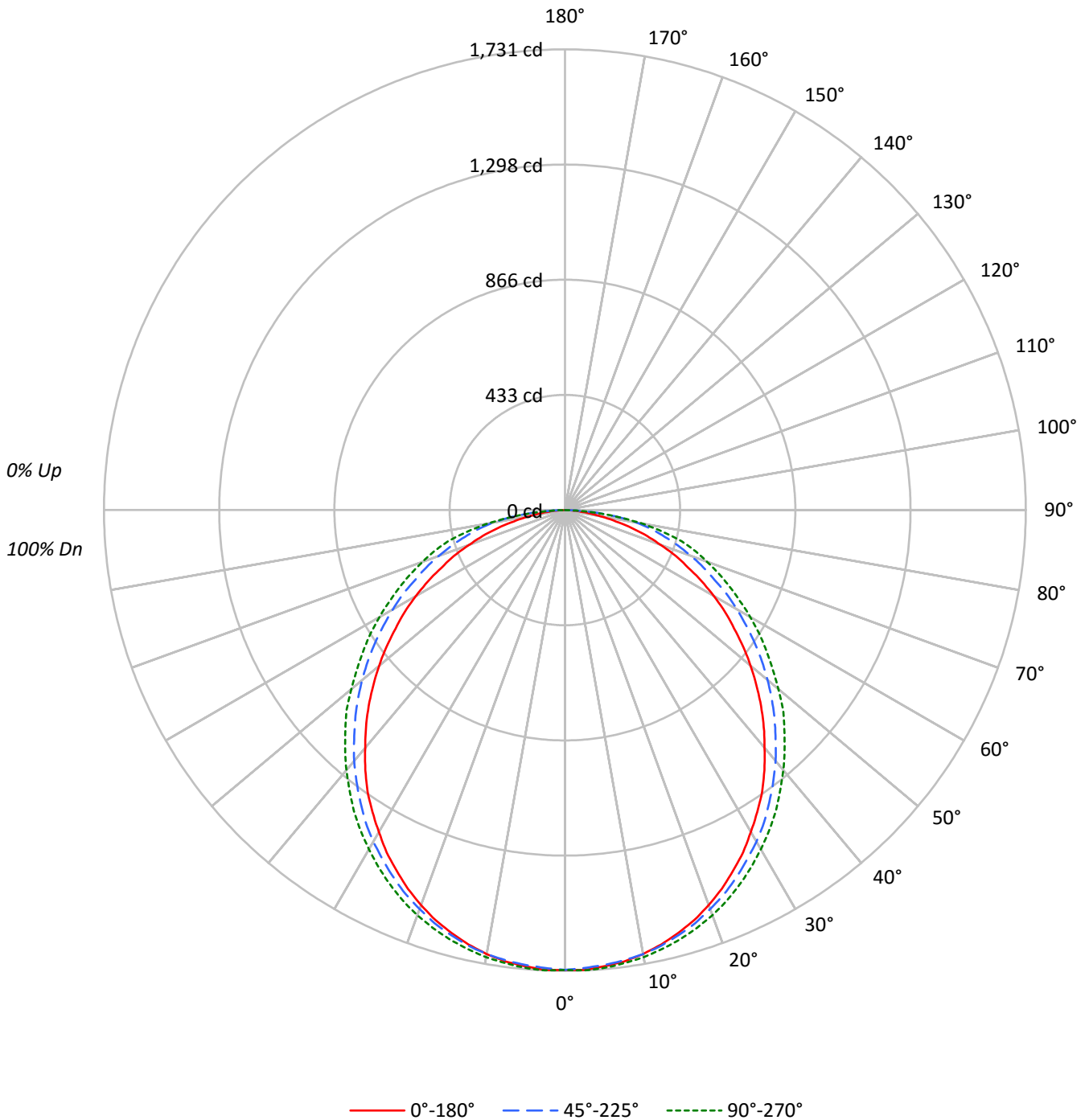
Lumens per Lamp: N/A
Luminaire Lumens: 4918.0 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 39.5
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°	2325	2325	2325
5°	2323	2317	2331
10°	2314	2314	2331
15°	2291	2302	2326
20°	2261	2284	2319
25°	2219	2261	2305
30°	2170	2235	2286
35°	2122	2199	2268
40°	2050	2162	2242
45°	1983	2119	2218
50°	1906	2080	2191
55°	1821	2041	2169
60°	1736	2009	2165
65°	1626	1975	2178
70°	1506	1985	2237
75°	1348	2022	2363
80°	1089	2142	2312
85°	820	1880	1832



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.6	3.3
10°-20°	467.4	9.5
20°-30°	702.6	14.3
30°-40°	836.9	17.0
40°-50°	856.5	17.4
50°-60°	771.1	15.7
60°-70°	605.5	12.3
70°-80°	393.0	8.0
80°-90°	121.5	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°	1333.5	27.1
0°-40°	2170.3	44.1
0°-60°	3797.9	77.2
0°-90°	4918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1728	1728	1728	1728	1728	
5°	1720	1723	1715	1725	1726	163
15°	1645	1650	1653	1667	1670	464
25°	1495	1508	1523	1548	1553	689
35°	1292	1308	1339	1372	1381	806
45°	1042	1067	1114	1156	1165	803
55°	776	811	870	915	925	696
65°	511	550	620	672	684	509
75°	259	309	389	442	455	274
85°	53	98	122	119	119	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1727.7	1727.7	1727.7	1727.7	1727.7
2.5°	1729.3	1729.3	1721.5	1729.3	1730.8
5°	1719.9	1723.0	1715.2	1724.6	1726.2
7.5°	1710.5	1710.5	1705.9	1715.2	1716.8
10°	1693.4	1694.9	1693.4	1704.3	1705.9
12.5°	1671.5	1674.6	1676.2	1687.1	1688.7
15°	1644.9	1649.6	1652.7	1666.8	1669.9
17.5°	1615.3	1619.9	1627.7	1643.4	1646.5
20°	1579.3	1585.6	1594.9	1615.3	1619.9
22.5°	1540.3	1546.5	1562.1	1580.9	1588.7
25°	1495.0	1507.5	1523.1	1548.1	1552.8
27.5°	1449.7	1460.6	1480.9	1507.5	1513.7
30°	1396.6	1413.7	1438.7	1465.3	1471.5
32.5°	1345.0	1362.2	1391.9	1420.0	1427.8
35°	1291.9	1307.5	1338.8	1371.6	1380.9
37.5°	1231.0	1251.3	1285.6	1318.4	1327.8
40°	1166.9	1191.9	1231.0	1265.3	1276.3
42.5°	1106.0	1132.6	1171.6	1209.1	1221.6
45°	1041.9	1066.9	1113.8	1156.0	1165.4
47.5°	976.3	1004.5	1054.4	1096.6	1112.2
50°	910.7	940.4	993.5	1037.3	1046.6
52.5°	845.1	876.4	932.6	979.5	984.1
55°	776.4	810.8	870.1	915.4	924.8
57.5°	713.9	743.6	807.6	854.5	865.4
60°	645.2	678.0	746.7	790.4	804.5
62.5°	579.6	613.9	685.8	729.5	742.0
65°	510.8	549.9	620.2	671.7	684.2
67.5°	451.5	488.9	563.9	613.9	626.4
70°	382.7	424.9	504.6	556.1	568.6
72.5°	323.4	367.1	446.8	496.8	515.5
75°	259.3	309.3	389.0	442.1	454.6
77.5°	196.8	254.6	335.9	376.5	376.5
80°	140.6	201.5	276.5	295.2	298.4
82.5°	92.2	151.5	204.6	203.1	203.1
85°	53.1	98.4	121.8	118.7	118.7
87.5°	20.3	40.6	43.7	43.7	42.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)