

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: P311538

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-4500K**

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: P311538
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 4888.0 lumens
Efficiency: N/A
Efficacy: 125.0 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

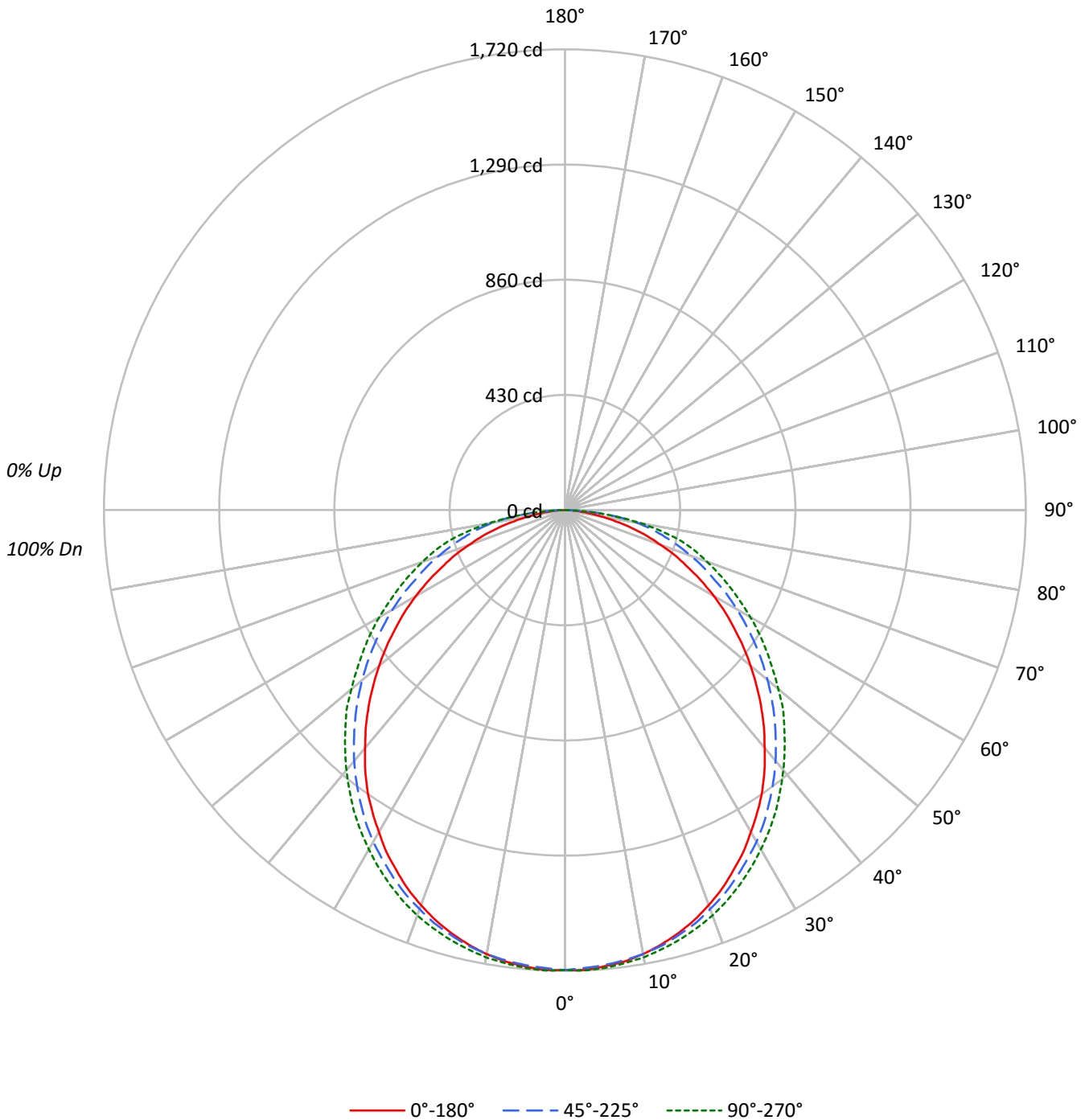
Input Watts (W): 39.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2310	2310	2310
5°	2309	2303	2317
10°	2299	2299	2316
15°	2277	2288	2312
20°	2248	2270	2305
25°	2206	2247	2291
30°	2156	2222	2272
35°	2109	2186	2254
40°	2037	2149	2228
45°	1971	2106	2204
50°	1895	2067	2177
55°	1810	2029	2156
60°	1725	1997	2152
65°	1616	1962	2165
70°	1496	1973	2223
75°	1340	2010	2349
80°	1082	2129	2297
85°	815	1870	1822



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.6	3.3
10°-20°	464.5	9.5
20°-30°	698.3	14.3
30°-40°	831.7	17.0
40°-50°	851.2	17.4
50°-60°	766.4	15.7
60°-70°	601.9	12.3
70°-80°	390.6	8.0
80°-90°	120.8	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°	1325.3	27.1
0°-40°	2157.1	44.1
0°-60°	3774.7	77.2
0°-90°	4888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1717	1717	1717	1717	1717	
5°	1709	1712	1705	1714	1716	162
15°	1635	1640	1643	1657	1660	461
25°	1486	1498	1514	1539	1543	684
35°	1284	1300	1331	1363	1372	801
45°	1036	1060	1107	1149	1158	798
55°	772	806	865	910	919	692
65°	508	546	616	668	680	505
75°	258	307	387	439	452	273
85°	53	98	121	118	118	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1717.2	1717.2	1717.2	1717.2	1717.2
2.5°	1718.7	1718.7	1711.0	1718.7	1720.3
5°	1709.4	1712.5	1704.8	1714.1	1715.6
7.5°	1700.1	1700.1	1695.4	1704.8	1706.3
10°	1683.0	1684.6	1683.0	1693.9	1695.4
12.5°	1661.3	1664.4	1666.0	1676.8	1678.4
15°	1634.9	1639.6	1642.7	1656.6	1659.7
17.5°	1605.4	1610.1	1617.8	1633.3	1636.5
20°	1569.7	1575.9	1585.2	1605.4	1610.1
22.5°	1530.9	1537.1	1552.6	1571.2	1579.0
25°	1485.8	1498.3	1513.8	1538.6	1543.3
27.5°	1440.8	1451.7	1471.9	1498.3	1504.5
30°	1388.0	1405.1	1430.0	1456.3	1462.6
32.5°	1336.8	1353.9	1383.4	1411.3	1419.1
35°	1284.0	1299.5	1330.6	1363.2	1372.5
37.5°	1223.5	1243.6	1277.8	1310.4	1319.7
40°	1159.8	1184.6	1223.5	1257.6	1268.5
42.5°	1099.2	1125.6	1164.5	1201.7	1214.1
45°	1035.6	1060.4	1107.0	1148.9	1158.2
47.5°	970.4	998.3	1048.0	1089.9	1105.5
50°	905.2	934.7	987.5	1030.9	1040.2
52.5°	840.0	871.0	926.9	973.5	978.1
55°	771.6	805.8	864.8	909.8	919.1
57.5°	709.5	739.0	802.7	849.3	860.1
60°	641.2	673.8	742.1	785.6	799.6
62.5°	576.0	610.2	681.6	725.1	737.5
65°	507.7	546.5	616.4	667.6	680.0
67.5°	448.7	486.0	560.5	610.2	622.6
70°	380.4	422.3	501.5	552.7	565.1
72.5°	321.4	364.9	444.0	493.7	512.4
75°	257.7	307.4	386.6	439.4	451.8
77.5°	195.6	253.1	333.8	374.2	374.2
80°	139.7	200.3	274.8	293.4	296.5
82.5°	91.6	150.6	203.4	201.8	201.8
85°	52.8	97.8	121.1	118.0	118.0
87.5°	20.2	40.4	43.5	43.5	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)