

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: P310862

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CA125-W2A-U-4000K**

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: P310862  
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-L82765-CA125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 4000K 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**

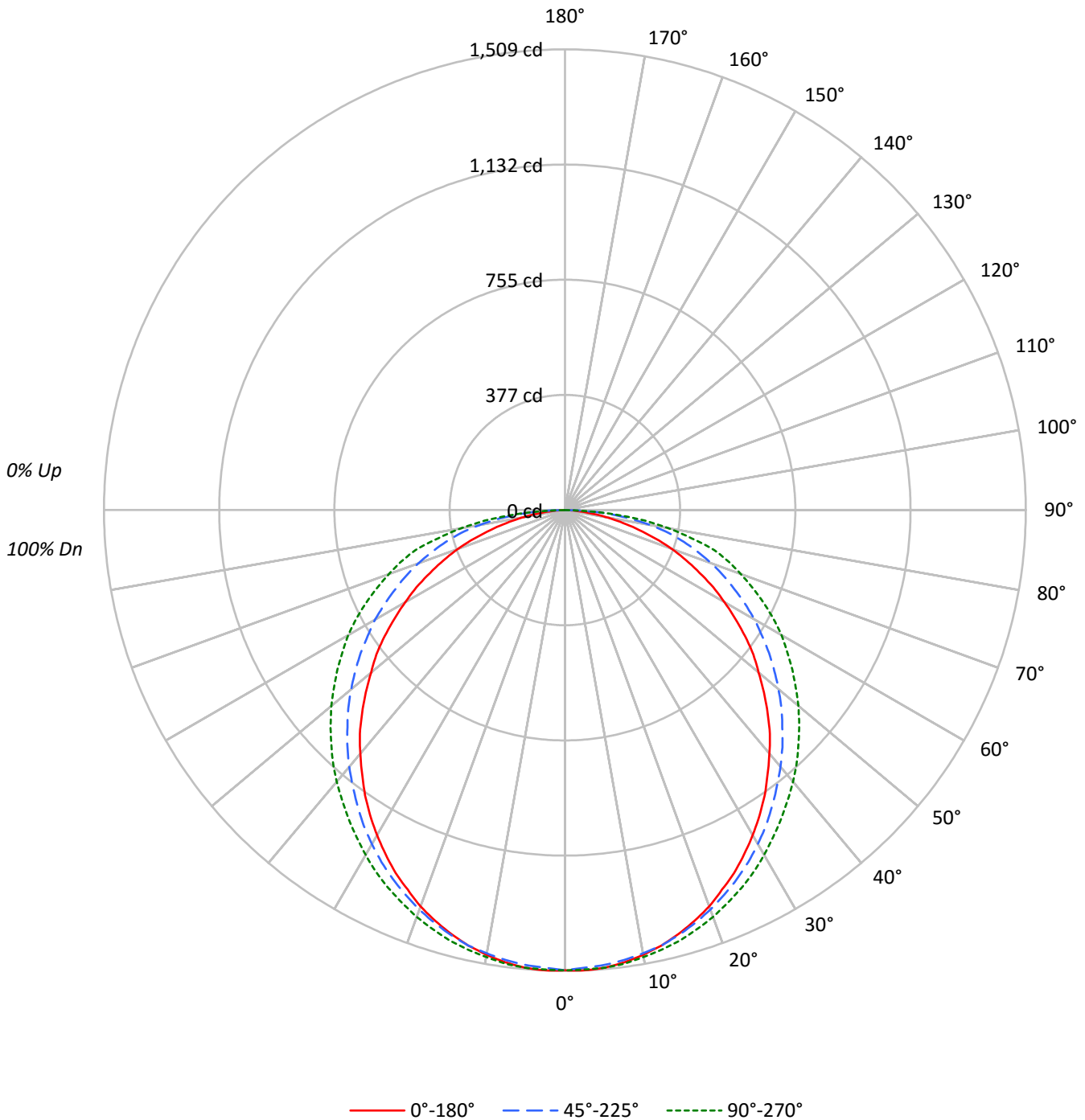
Lumens per Lamp: N/A  
Luminaire Lumens: 4571.0 lumens  
Efficiency: N/A  
Efficacy: 117.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2028	2028	2028
5°	2032	2020	2032
10°	2020	2014	2031
15°	2003	2007	2032
20°	1978	1993	2030
25°	1947	1979	2029
30°	1911	1963	2026
35°	1873	1943	2028
40°	1830	1929	2040
45°	1786	1916	2058
50°	1733	1911	2089
55°	1690	1914	2131
60°	1624	1930	2204
65°	1550	1951	2284
70°	1468	2011	2410
75°	1309	2097	2633
80°	1117	2221	2691
85°	797	2201	2575



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.7	3.1
10°-20°	407.9	8.9
20°-30°	616.1	13.5
30°-40°	742.6	16.2
40°-50°	779.6	17.1
50°-60°	729.3	16.0
60°-70°	602.3	13.2
70°-80°	410.4	9.0
80°-90°	140.0	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°	1166.7	25.5
0°-40°	1909.3	41.8
0°-60°	3418.3	74.8
0°-90°	4571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4571.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1508	1508	1508	1508	1508	
5°	1504	1503	1495	1504	1504	143
15°	1438	1439	1441	1456	1459	405
25°	1312	1318	1333	1359	1366	604
35°	1140	1153	1183	1222	1234	713
45°	939	958	1007	1062	1081	724
55°	720	749	816	883	908	643
65°	487	528	613	690	717	483
75°	252	309	403	479	506	268
85°	52	102	143	161	167	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1507.5	1507.5	1507.5	1507.5	1507.5
2.5°	1509.0	1507.5	1499.9	1507.5	1506.0
5°	1504.4	1502.9	1495.3	1504.4	1504.4
7.5°	1493.8	1493.8	1486.2	1496.9	1498.4
10°	1478.7	1478.7	1474.1	1486.2	1486.2
12.5°	1460.5	1460.5	1460.5	1472.6	1474.1
15°	1437.7	1439.2	1440.7	1455.9	1458.9
17.5°	1410.4	1413.4	1418.0	1436.2	1439.2
20°	1381.6	1384.6	1392.2	1413.4	1418.0
22.5°	1345.2	1352.8	1363.4	1387.7	1392.2
25°	1311.8	1317.9	1333.1	1358.9	1366.4
27.5°	1270.9	1280.0	1299.7	1327.0	1337.6
30°	1229.9	1239.0	1263.3	1295.2	1304.3
32.5°	1186.0	1199.6	1225.4	1258.8	1269.4
35°	1140.5	1152.6	1182.9	1222.4	1234.5
37.5°	1090.4	1107.1	1140.5	1182.9	1198.1
40°	1041.9	1060.1	1098.0	1143.5	1161.7
42.5°	993.4	1011.6	1054.0	1105.6	1123.8
45°	938.8	958.5	1007.0	1061.6	1081.3
47.5°	884.2	908.4	961.5	1019.1	1040.4
50°	828.1	855.3	913.0	973.6	997.9
52.5°	778.0	803.8	864.4	929.7	952.4
55°	720.4	749.2	815.9	882.6	908.4
57.5°	661.2	693.1	764.4	837.1	862.9
60°	603.6	638.5	717.3	790.1	819.0
62.5°	547.5	582.4	664.3	740.1	768.9
65°	486.8	527.8	612.7	690.0	717.3
67.5°	429.2	473.2	562.6	638.5	665.8
70°	373.1	415.5	511.1	585.4	612.7
72.5°	312.4	360.9	456.5	533.8	562.6
75°	251.8	309.4	403.4	479.2	506.5
77.5°	195.6	254.8	348.8	411.0	424.6
80°	144.1	204.7	286.6	330.6	347.3
82.5°	92.5	153.2	218.4	250.2	263.9
85°	51.6	101.6	142.6	160.8	166.8
87.5°	21.2	44.0	57.6	65.2	65.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)