

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: P314017

Luminaire Tested: **24FCZ2-50-UNV-L83050-CA08-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: P314017  
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: 24FCZ2-50-UNV-L83050-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 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**

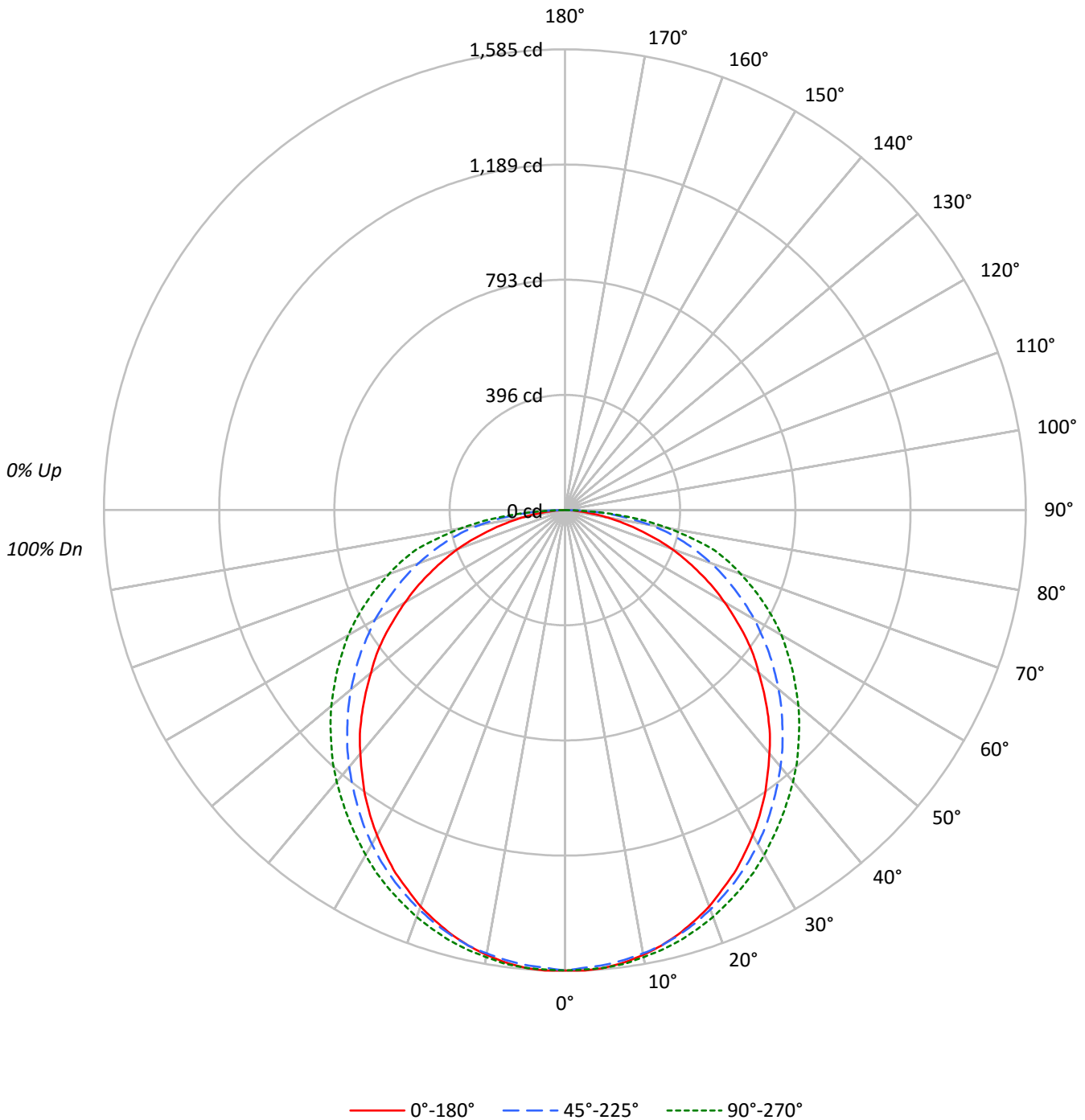
Lumens per Lamp: N/A  
Luminaire Lumens: 4802.0 lumens  
Efficiency: N/A  
Efficacy: 109.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2131	2131	2131
5°	2135	2122	2135
10°	2122	2116	2133
15°	2104	2108	2135
20°	2078	2094	2133
25°	2046	2079	2131
30°	2007	2062	2129
35°	1968	2041	2130
40°	1922	2026	2144
45°	1877	2013	2162
50°	1821	2008	2194
55°	1775	2011	2239
60°	1706	2028	2315
65°	1628	2049	2399
70°	1542	2112	2532
75°	1375	2203	2766
80°	1173	2333	2827
85°	837	2313	2706



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.9	3.1
10°-20°	428.6	8.9
20°-30°	647.3	13.5
30°-40°	780.1	16.2
40°-50°	819.0	17.1
50°-60°	766.2	16.0
60°-70°	632.8	13.2
70°-80°	431.2	9.0
80°-90°	147.0	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°	1225.7	25.5
0°-40°	2005.8	41.8
0°-60°	3591.0	74.8
0°-90°	4802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4802.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1584	1584	1584	1584	1584	
5°	1580	1579	1571	1580	1580	150
15°	1510	1512	1514	1530	1533	426
25°	1378	1384	1400	1428	1436	634
35°	1198	1211	1243	1284	1297	749
45°	986	1007	1058	1115	1136	761
55°	757	787	857	927	954	675
65°	511	554	644	725	754	507
75°	264	325	424	504	532	282
85°	54	107	150	169	175	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1583.7	1583.7	1583.7	1583.7	1583.7
2.5°	1585.3	1583.7	1575.7	1583.7	1582.1
5°	1580.5	1578.9	1570.9	1580.5	1580.5
7.5°	1569.3	1569.3	1561.4	1572.5	1574.1
10°	1553.4	1553.4	1548.6	1561.4	1561.4
12.5°	1534.3	1534.3	1534.3	1547.0	1548.6
15°	1510.4	1512.0	1513.6	1529.5	1532.7
17.5°	1481.7	1484.9	1489.7	1508.8	1512.0
20°	1451.4	1454.6	1462.6	1484.9	1489.7
22.5°	1413.2	1421.1	1432.3	1457.8	1462.6
25°	1378.1	1384.5	1400.4	1427.5	1435.5
27.5°	1335.1	1344.7	1365.4	1394.1	1405.2
30°	1292.1	1301.7	1327.1	1360.6	1370.2
32.5°	1245.9	1260.2	1287.3	1322.4	1333.5
35°	1198.1	1210.8	1242.7	1284.1	1296.9
37.5°	1145.5	1163.0	1198.1	1242.7	1258.6
40°	1094.5	1113.7	1153.5	1201.3	1220.4
42.5°	1043.6	1062.7	1107.3	1161.5	1180.6
45°	986.2	1006.9	1057.9	1115.3	1136.0
47.5°	928.8	954.3	1010.1	1070.6	1092.9
50°	869.9	898.6	959.1	1022.8	1048.3
52.5°	817.3	844.4	908.1	976.6	1000.5
55°	756.8	787.0	857.2	927.3	954.3
57.5°	694.6	728.1	803.0	879.5	906.5
60°	634.1	670.7	753.6	830.1	860.3
62.5°	575.2	611.8	697.8	777.5	807.8
65°	511.4	554.4	643.7	724.9	753.6
67.5°	450.9	497.1	591.1	670.7	699.4
70°	391.9	436.5	536.9	615.0	643.7
72.5°	328.2	379.2	479.6	560.8	591.1
75°	264.5	325.0	423.8	503.5	532.1
77.5°	205.5	267.7	366.4	431.8	446.1
80°	151.4	215.1	301.1	347.3	364.8
82.5°	97.2	160.9	229.4	262.9	277.2
85°	54.2	106.7	149.8	168.9	175.3
87.5°	22.3	46.2	60.5	68.5	68.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)