

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: P314412

Luminaire Tested: **24FCZ2-50-UNV-L83050-S-CP250-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: P314412  
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: 24FCZ2-50-UNV-L83050-S-CP250-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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**

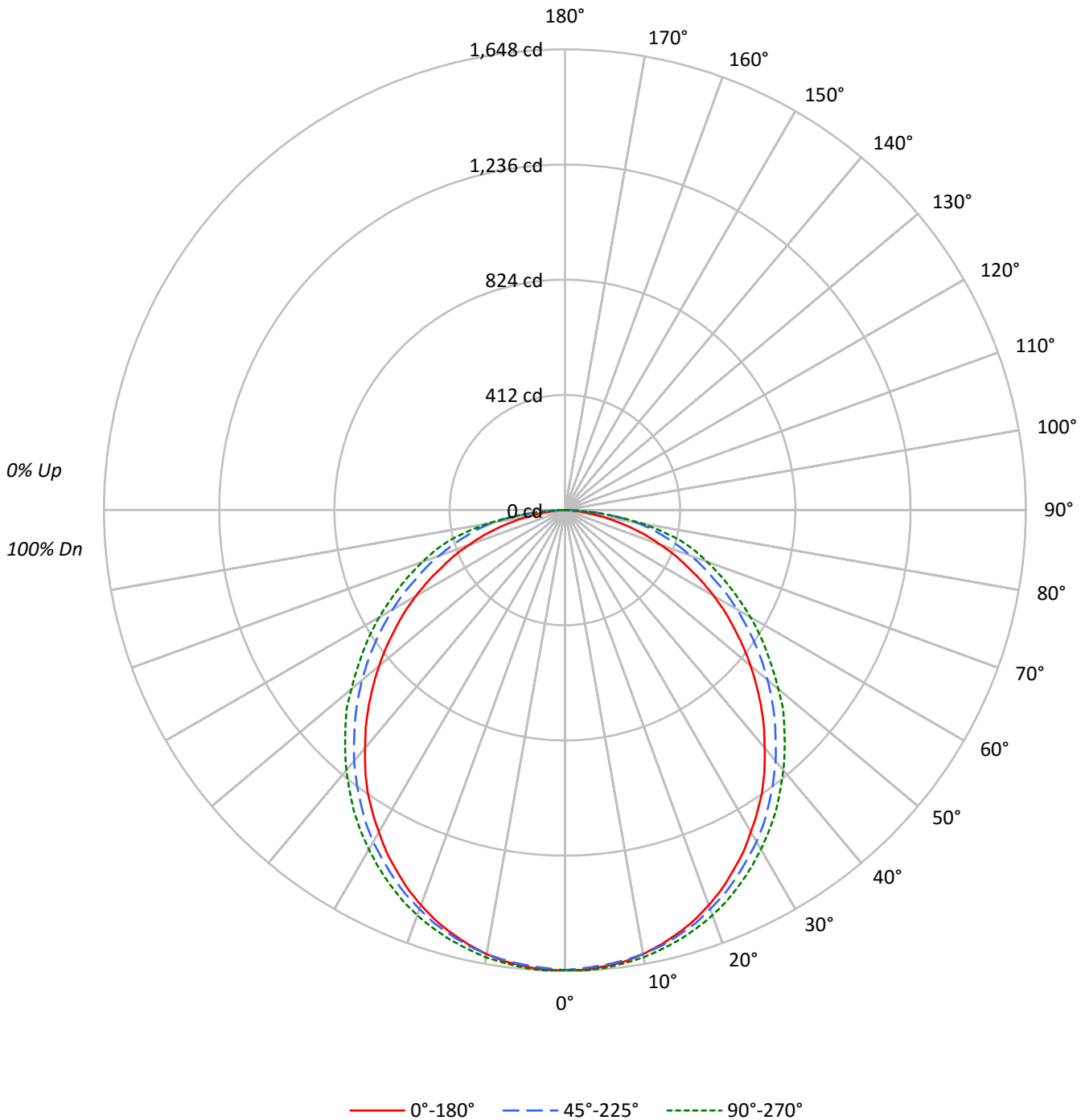
Lumens per Lamp: N/A  
Luminaire Lumens: 4683.0 lumens  
Efficiency: N/A  
Efficacy: 107.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	2214	2214	2214
5°	2212	2206	2220
10°	2203	2203	2219
15°	2182	2192	2215
20°	2153	2175	2209
25°	2113	2153	2195
30°	2066	2128	2177
35°	2021	2094	2160
40°	1952	2059	2135
45°	1888	2018	2112
50°	1815	1980	2086
55°	1734	1943	2066
60°	1653	1913	2062
65°	1549	1880	2074
70°	1434	1890	2130
75°	1284	1926	2250
80°	1038	2040	2201
85°	781	1791	1744



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.7	3.3
10°-20°	445.0	9.5
20°-30°	669.0	14.3
30°-40°	796.9	17.0
40°-50°	815.6	17.4
50°-60°	734.2	15.7
60°-70°	576.6	12.3
70°-80°	374.2	8.0
80°-90°	115.7	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°	1269.8	27.1
0°-40°	2066.6	44.1
0°-60°	3616.4	77.2
0°-90°	4683.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4683.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1645	1645	1645	1645	1645	
5°	1638	1641	1633	1642	1644	156
15°	1566	1571	1574	1587	1590	442
25°	1424	1435	1450	1474	1479	656
35°	1230	1245	1275	1306	1315	767
45°	992	1016	1061	1101	1110	765
55°	739	772	828	872	881	663
65°	486	524	590	640	652	484
75°	247	294	370	421	433	261
85°	51	94	116	113	113	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1645.2	1645.2	1645.2	1645.2	1645.2
2.5°	1646.7	1646.7	1639.2	1646.7	1648.1
5°	1637.7	1640.7	1633.3	1642.2	1643.7
7.5°	1628.8	1628.8	1624.3	1633.3	1634.8
10°	1612.4	1613.9	1612.4	1622.9	1624.3
12.5°	1591.6	1594.6	1596.1	1606.5	1608.0
15°	1566.3	1570.8	1573.8	1587.2	1590.1
17.5°	1538.1	1542.5	1550.0	1564.8	1567.8
20°	1503.9	1509.8	1518.7	1538.1	1542.5
22.5°	1466.7	1472.6	1487.5	1505.3	1512.8
25°	1423.5	1435.4	1450.3	1474.1	1478.6
27.5°	1380.4	1390.8	1410.1	1435.4	1441.4
30°	1329.8	1346.2	1370.0	1395.3	1401.2
32.5°	1280.7	1297.1	1325.4	1352.1	1359.6
35°	1230.2	1245.0	1274.8	1306.0	1314.9
37.5°	1172.1	1191.5	1224.2	1255.4	1264.4
40°	1111.2	1135.0	1172.1	1204.9	1215.3
42.5°	1053.1	1078.4	1115.6	1151.3	1163.2
45°	992.2	1016.0	1060.6	1100.7	1109.7
47.5°	929.7	956.5	1004.1	1044.2	1059.1
50°	867.2	895.5	946.0	987.7	996.6
52.5°	804.7	834.5	888.0	932.7	937.1
55°	739.3	772.0	828.5	871.7	880.6
57.5°	679.8	708.0	769.0	813.7	824.1
60°	614.3	645.6	711.0	752.7	766.1
62.5°	551.9	584.6	653.0	694.7	706.6
65°	486.4	523.6	590.5	639.6	651.5
67.5°	429.9	465.6	537.0	584.6	596.5
70°	364.4	404.6	480.5	529.5	541.4
72.5°	307.9	349.6	425.4	473.0	490.9
75°	246.9	294.5	370.4	421.0	432.9
77.5°	187.4	242.5	319.8	358.5	358.5
80°	133.9	191.9	263.3	281.1	284.1
82.5°	87.8	144.3	194.9	193.4	193.4
85°	50.6	93.7	116.0	113.0	113.0
87.5°	19.3	38.7	41.6	41.6	40.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)