

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: P313992

Luminaire Tested: **24FCZ2-50HE-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: P313992  
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-L83050-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" 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**

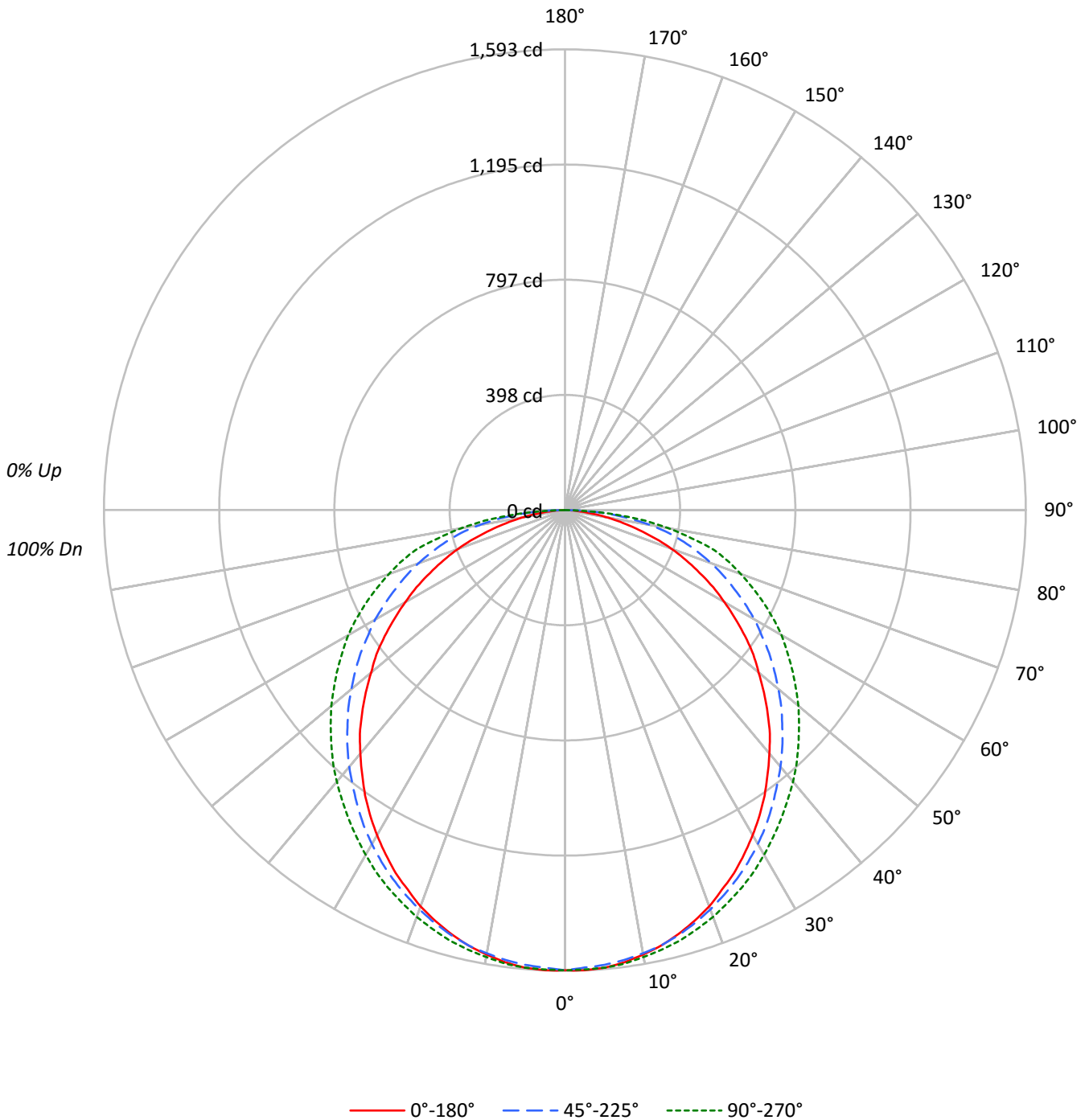
Lumens per Lamp: N/A  
Luminaire Lumens: 4825.0 lumens  
Efficiency: N/A  
Efficacy: 122.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 39.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	2141	2141	2141
5°	2145	2132	2145
10°	2132	2126	2143
15°	2114	2118	2145
20°	2088	2104	2143
25°	2056	2089	2141
30°	2017	2072	2139
35°	1977	2051	2140
40°	1932	2036	2154
45°	1885	2023	2172
50°	1830	2017	2205
55°	1784	2020	2249
60°	1714	2038	2326
65°	1636	2059	2411
70°	1549	2122	2544
75°	1381	2214	2780
80°	1179	2345	2841
85°	840	2323	2719



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.6	3.1
10°-20°	430.6	8.9
20°-30°	650.4	13.5
30°-40°	783.9	16.2
40°-50°	822.9	17.1
50°-60°	769.9	16.0
60°-70°	635.8	13.2
70°-80°	433.2	9.0
80°-90°	147.7	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°	1231.6	25.5
0°-40°	2015.4	41.8
0°-60°	3608.2	74.8
0°-90°	4825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4825.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1591	1591	1591	1591	1591	
5°	1588	1586	1578	1588	1588	151
15°	1518	1519	1521	1537	1540	428
25°	1385	1391	1407	1434	1442	637
35°	1204	1217	1249	1290	1303	752
45°	991	1012	1063	1121	1141	764
55°	760	791	861	932	959	679
65°	514	557	647	728	757	510
75°	266	327	426	506	535	283
85°	54	107	150	170	176	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1591.2	1591.2	1591.2	1591.2	1591.2
2.5°	1592.8	1591.2	1583.2	1591.2	1589.6
5°	1588.0	1586.4	1578.4	1588.0	1588.0
7.5°	1576.8	1576.8	1568.8	1580.0	1581.6
10°	1560.8	1560.8	1556.0	1568.8	1568.8
12.5°	1541.6	1541.6	1541.6	1554.4	1556.0
15°	1517.6	1519.2	1520.8	1536.8	1540.0
17.5°	1488.8	1492.0	1496.8	1516.0	1519.2
20°	1458.4	1461.6	1469.6	1492.0	1496.8
22.5°	1420.0	1428.0	1439.2	1464.8	1469.6
25°	1384.7	1391.1	1407.1	1434.4	1442.4
27.5°	1341.5	1351.1	1371.9	1400.7	1411.9
30°	1298.3	1307.9	1333.5	1367.1	1376.7
32.5°	1251.9	1266.3	1293.5	1328.7	1339.9
35°	1203.8	1216.6	1248.7	1290.3	1303.1
37.5°	1151.0	1168.6	1203.8	1248.7	1264.7
40°	1099.8	1119.0	1159.0	1207.0	1226.2
42.5°	1048.6	1067.8	1112.6	1167.0	1186.2
45°	990.9	1011.7	1063.0	1120.6	1141.4
47.5°	933.3	958.9	1014.9	1075.8	1098.2
50°	874.1	902.9	963.7	1027.7	1053.4
52.5°	821.2	848.4	912.5	981.3	1005.3
55°	760.4	790.8	861.3	931.7	958.9
57.5°	698.0	731.6	806.8	883.7	910.9
60°	637.1	674.0	757.2	834.0	864.5
62.5°	577.9	614.7	701.2	781.2	811.6
65°	513.9	557.1	646.7	728.4	757.2
67.5°	453.0	499.5	593.9	674.0	702.8
70°	393.8	438.6	539.5	617.9	646.7
72.5°	329.8	381.0	481.9	563.5	593.9
75°	265.7	326.6	425.8	505.9	534.7
77.5°	206.5	268.9	368.2	433.8	448.2
80°	152.1	216.1	302.6	349.0	366.6
82.5°	97.7	161.7	230.5	264.1	278.5
85°	54.4	107.3	150.5	169.7	176.1
87.5°	22.4	46.4	60.8	68.8	68.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)