

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: P314110

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-CP250-W2A-U-3000K**

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: P314110  
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: 24FCZ2-65HE-UNV-L83050-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 3000K 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**

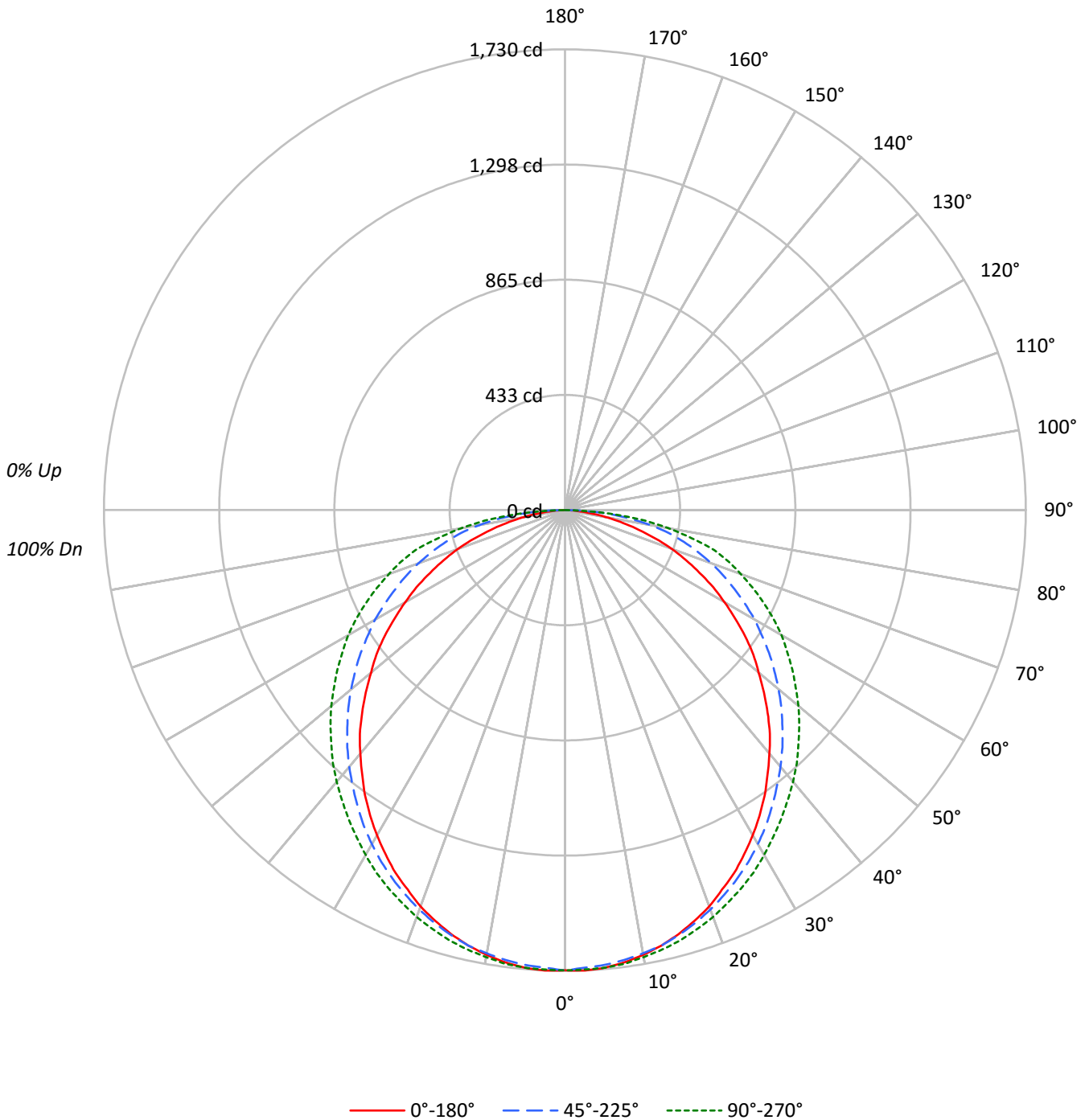
Lumens per Lamp: N/A  
Luminaire Lumens: 5241.0 lumens  
Efficiency: N/A  
Efficacy: 99.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 52.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	2326	2326	2326
5°	2330	2316	2330
10°	2316	2309	2328
15°	2296	2301	2330
20°	2268	2286	2328
25°	2233	2269	2326
30°	2191	2250	2323
35°	2148	2228	2325
40°	2098	2211	2340
45°	2048	2197	2359
50°	1987	2191	2395
55°	1938	2194	2443
60°	1862	2213	2527
65°	1777	2237	2619
70°	1683	2305	2764
75°	1501	2404	3019
80°	1280	2546	3085
85°	912	2524	2953



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.6	3.1
10°-20°	467.7	8.9
20°-30°	706.5	13.5
30°-40°	851.4	16.2
40°-50°	893.9	17.1
50°-60°	836.3	16.0
60°-70°	690.6	13.2
70°-80°	470.6	9.0
80°-90°	160.5	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°	1337.8	25.5
0°-40°	2189.2	41.8
0°-60°	3919.3	74.8
0°-90°	5241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5241.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1728	1728	1728	1728	1728	
5°	1725	1723	1714	1725	1725	164
15°	1648	1650	1652	1669	1673	465
25°	1504	1511	1528	1558	1567	692
35°	1308	1322	1356	1402	1415	817
45°	1076	1099	1155	1217	1240	830
55°	826	859	936	1012	1042	737
65°	558	605	702	791	822	554
75°	289	355	462	550	581	308
85°	59	116	164	184	191	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1728.4	1728.4	1728.4	1728.4	1728.4
2.5°	1730.2	1728.4	1719.7	1728.4	1726.7
5°	1725.0	1723.2	1714.5	1725.0	1725.0
7.5°	1712.8	1712.8	1704.1	1716.3	1718.0
10°	1695.4	1695.4	1690.2	1704.1	1704.1
12.5°	1674.5	1674.5	1674.5	1688.4	1690.2
15°	1648.4	1650.2	1651.9	1669.3	1672.8
17.5°	1617.1	1620.6	1625.8	1646.7	1650.2
20°	1584.1	1587.6	1596.3	1620.6	1625.8
22.5°	1542.4	1551.1	1563.2	1591.1	1596.3
25°	1504.1	1511.1	1528.5	1558.0	1566.7
27.5°	1457.2	1467.6	1490.2	1521.5	1533.7
30°	1410.2	1420.7	1448.5	1485.0	1495.4
32.5°	1359.8	1375.4	1405.0	1443.3	1455.4
35°	1307.6	1321.5	1356.3	1401.5	1415.4
37.5°	1250.2	1269.4	1307.6	1356.3	1373.7
40°	1194.6	1215.5	1258.9	1311.1	1332.0
42.5°	1139.0	1159.8	1208.5	1267.6	1288.5
45°	1076.4	1099.0	1154.6	1217.2	1239.8
47.5°	1013.8	1041.6	1102.4	1168.5	1192.9
50°	949.4	980.7	1046.8	1116.4	1144.2
52.5°	892.0	921.6	991.2	1065.9	1092.0
55°	826.0	859.0	935.5	1012.0	1041.6
57.5°	758.1	794.7	876.4	959.9	989.4
60°	692.1	732.1	822.5	906.0	939.0
62.5°	627.7	667.7	761.6	848.6	881.6
65°	558.2	605.1	702.5	791.2	822.5
67.5°	492.1	542.5	645.1	732.1	763.4
70°	427.8	476.5	586.0	671.2	702.5
72.5°	358.2	413.9	523.4	612.1	645.1
75°	288.7	354.7	462.5	549.5	580.8
77.5°	224.3	292.1	399.9	471.2	486.9
80°	165.2	234.7	328.6	379.1	398.2
82.5°	106.1	175.6	250.4	286.9	302.6
85°	59.1	116.5	163.5	184.3	191.3
87.5°	24.3	50.4	66.1	74.8	74.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)