

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: P314042

Luminaire Tested: **24FCZ2-55HE-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: P314042  
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: 24FCZ2-55HE-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**

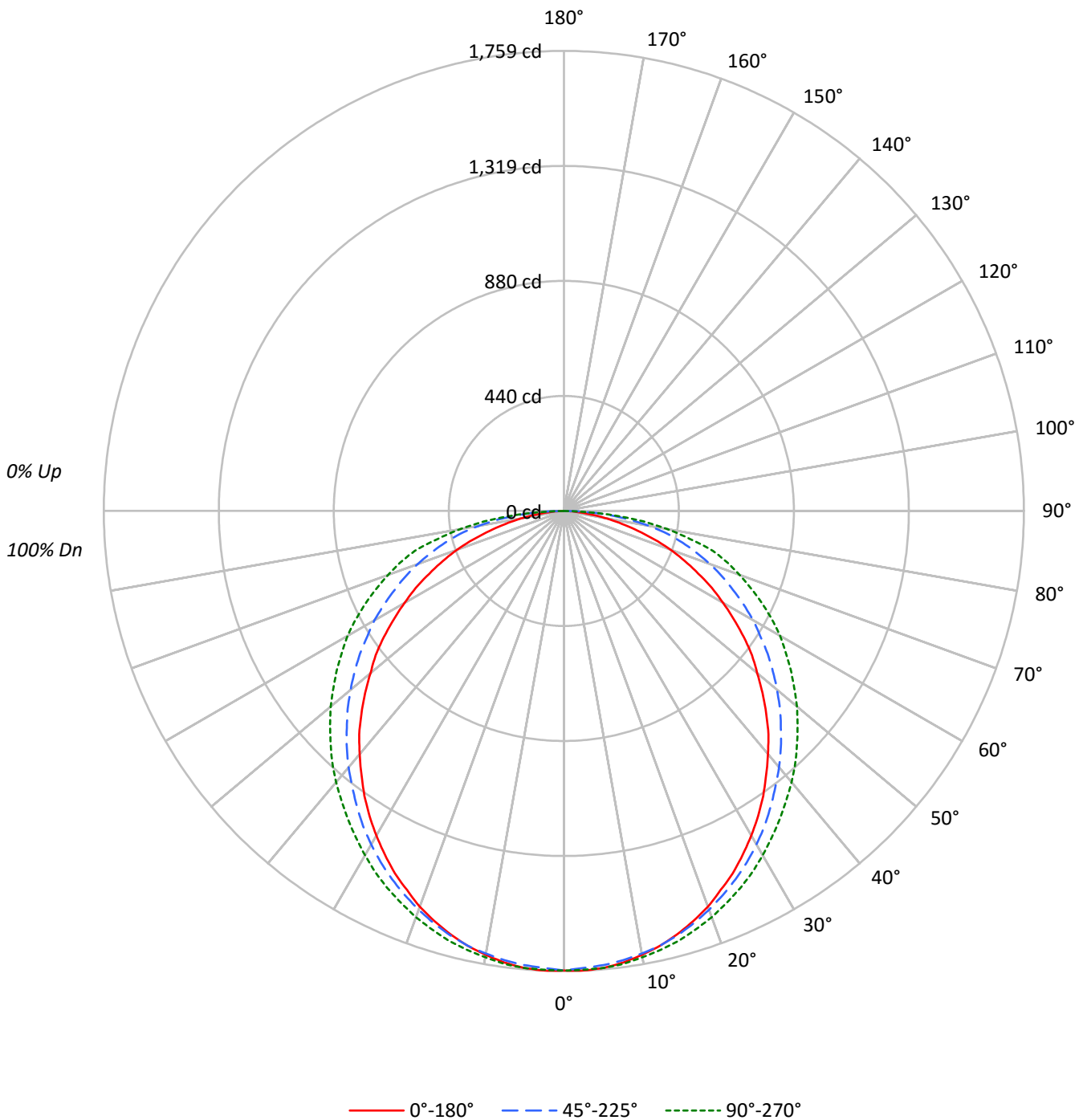
Lumens per Lamp: N/A  
Luminaire Lumens: 5328.0 lumens  
Efficiency: N/A  
Efficacy: 120.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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	50	30	10	0		
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100		
	1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82	82	82	82	82	82		
	2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67	67	67	67	67	67		
	3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56	56	56	56	56	56		
	4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47	47	47	47	47	47		
	5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41	41	41	41	41	41		
	6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36	36	36	36	36	36		
	7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31	31	31	31	31	31		
	8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28	28	28	28	28	28		
	9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25	25	25	25	25	25		
	10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23	23	23	23	23	23		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2364	2364	2364
5°	2368	2354	2368
10°	2355	2347	2367
15°	2334	2339	2369
20°	2306	2324	2367
25°	2270	2307	2364
30°	2227	2288	2362
35°	2183	2265	2363
40°	2133	2248	2378
45°	2082	2234	2398
50°	2020	2228	2435
55°	1970	2231	2484
60°	1893	2250	2569
65°	1806	2274	2662
70°	1711	2343	2810
75°	1525	2444	3069
80°	1301	2589	3137
85°	928	2566	3003



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.3	3.1
10°-20°	475.5	8.9
20°-30°	718.2	13.5
30°-40°	865.6	16.2
40°-50°	908.7	17.1
50°-60°	850.1	16.0
60°-70°	702.1	13.2
70°-80°	478.4	9.0
80°-90°	163.2	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°	1360.0	25.5
0°-40°	2225.5	41.8
0°-60°	3984.4	74.8
0°-90°	5328.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5328.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1757	1757	1757	1757	1757	
5°	1754	1752	1743	1754	1754	166
15°	1676	1678	1679	1697	1701	472
25°	1529	1536	1554	1584	1593	704
35°	1329	1344	1379	1425	1439	831
45°	1094	1117	1174	1237	1260	844
55°	840	873	951	1029	1059	749
65°	567	615	714	804	836	563
75°	293	361	470	559	590	313
85°	60	118	166	187	194	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1757.1	1757.1	1757.1	1757.1	1757.1
2.5°	1758.9	1757.1	1748.3	1757.1	1755.4
5°	1753.6	1751.8	1743.0	1753.6	1753.6
7.5°	1741.2	1741.2	1732.4	1744.8	1746.5
10°	1723.5	1723.5	1718.2	1732.4	1732.4
12.5°	1702.3	1702.3	1702.3	1716.5	1718.2
15°	1675.8	1677.6	1679.3	1697.0	1700.6
17.5°	1644.0	1647.5	1652.8	1674.0	1677.6
20°	1610.4	1613.9	1622.8	1647.5	1652.8
22.5°	1568.0	1576.8	1589.2	1617.5	1622.8
25°	1529.1	1536.2	1553.8	1583.9	1592.7
27.5°	1481.4	1492.0	1514.9	1546.8	1559.1
30°	1433.6	1444.2	1472.5	1509.6	1520.3
32.5°	1382.4	1398.3	1428.3	1467.2	1479.6
35°	1329.3	1343.5	1378.8	1424.8	1438.9
37.5°	1271.0	1290.4	1329.3	1378.8	1396.5
40°	1214.4	1235.6	1279.8	1332.9	1354.1
42.5°	1157.9	1179.1	1228.6	1288.7	1309.9
45°	1094.2	1117.2	1173.8	1237.4	1260.4
47.5°	1030.6	1058.9	1120.7	1187.9	1212.7
50°	965.2	997.0	1064.2	1134.9	1163.2
52.5°	906.8	936.9	1007.6	1083.6	1110.1
55°	839.7	873.3	951.0	1028.8	1058.9
57.5°	770.7	807.9	890.9	975.8	1005.8
60°	703.6	744.2	836.1	921.0	954.6
62.5°	638.2	678.8	774.3	862.7	896.2
65°	567.4	615.2	714.2	804.3	836.1
67.5°	500.3	551.5	655.8	744.2	776.0
70°	434.9	484.4	595.7	682.3	714.2
72.5°	364.2	420.7	532.1	622.2	655.8
75°	293.4	360.6	470.2	558.6	590.4
77.5°	228.0	297.0	406.6	479.1	495.0
80°	167.9	238.6	334.1	385.4	404.8
82.5°	107.8	178.5	254.6	291.7	307.6
85°	60.1	118.4	166.2	187.4	194.5
87.5°	24.7	51.3	67.2	76.0	76.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)