

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: P309552

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-5700K**

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: P309552  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
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-L82765-HRP-CA08-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 5700K 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**

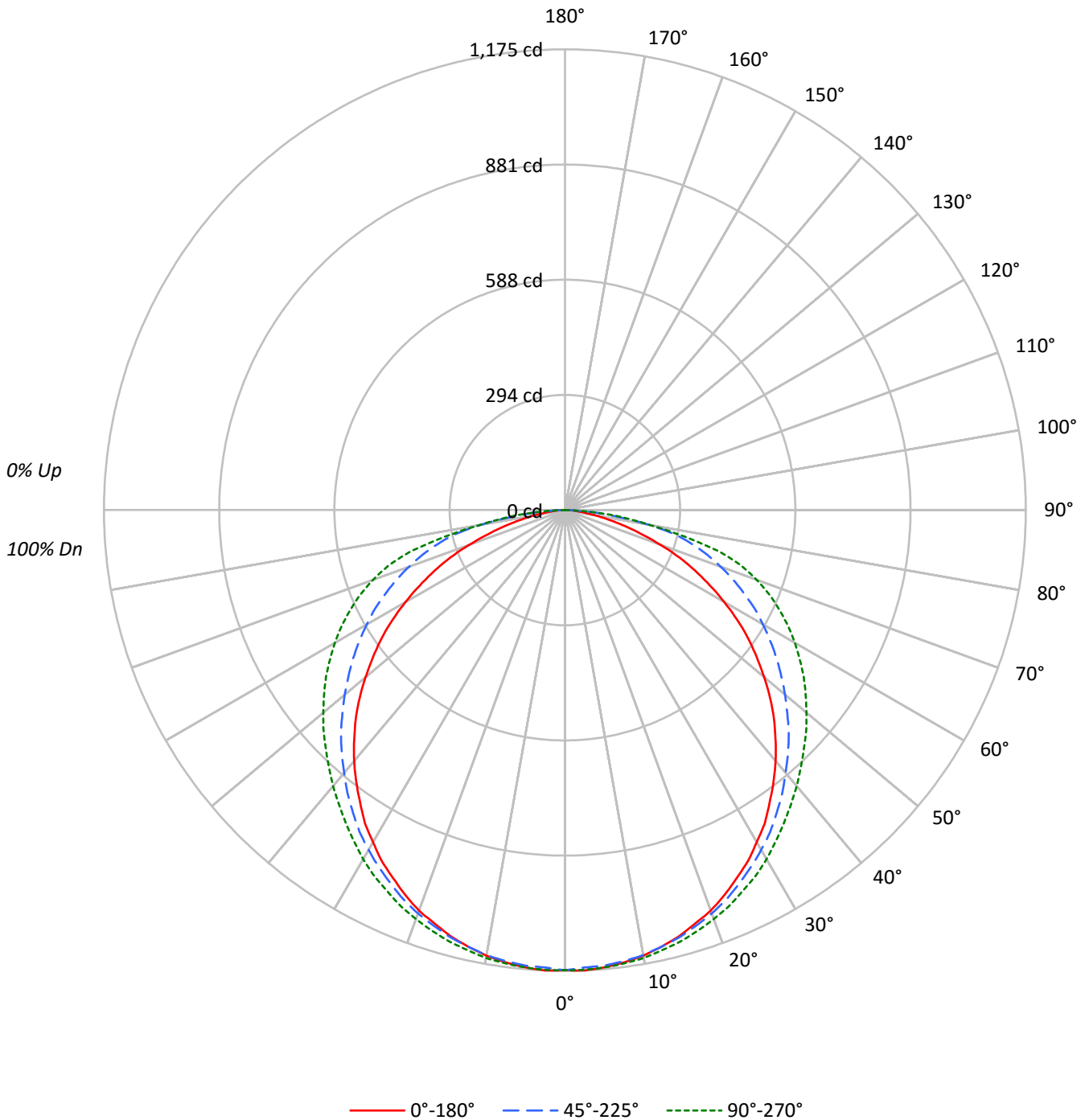
Lumens per Lamp: N/A  
Luminaire Lumens: 3617.0 lumens  
Efficiency: N/A  
Efficacy: 82.4 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

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

	0°	45°	90°
0°	1579	1579	1579
5°	1581	1575	1581
10°	1577	1574	1585
15°	1567	1571	1586
20°	1557	1568	1589
25°	1538	1560	1592
30°	1520	1555	1597
35°	1495	1547	1599
40°	1468	1537	1614
45°	1435	1536	1639
50°	1388	1534	1683
55°	1339	1545	1744
60°	1263	1569	1822
65°	1167	1605	1924
70°	1018	1662	2049
75°	827	1748	2117
80°	610	1713	1713
85°	468	1263	1426



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.2	3.1
10°-20°	319.2	8.8
20°-30°	486.0	13.4
30°-40°	590.1	16.3
40°-50°	623.5	17.2
50°-60°	588.3	16.3
60°-70°	489.1	13.5
70°-80°	321.8	8.9
80°-90°	87.7	2.4
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°	916.4	25.3
0°-40°	1506.5	41.7
0°-60°	2718.3	75.2
0°-90°	3617.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3617.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1174	1174	1174	1174	1174	
5°	1170	1170	1166	1170	1170	111
15°	1125	1127	1128	1139	1139	317
25°	1036	1042	1051	1069	1072	478
35°	910	921	942	966	974	570
45°	754	769	807	846	862	581
55°	571	595	659	721	744	508
65°	366	409	504	578	604	362
75°	159	232	336	398	407	171
85°	30	67	82	91	92	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1173.5	1173.5	1173.5	1173.5	1173.5
2.5°	1175.1	1173.5	1167.5	1173.5	1173.5
5°	1170.5	1170.5	1166.0	1170.5	1170.5
7.5°	1162.9	1162.9	1159.9	1166.0	1166.0
10°	1153.9	1153.9	1152.3	1159.9	1159.9
12.5°	1140.2	1141.7	1140.2	1149.3	1149.3
15°	1125.1	1126.6	1128.1	1138.7	1138.7
17.5°	1105.4	1108.4	1111.5	1123.6	1125.1
20°	1087.2	1088.7	1094.8	1108.4	1109.9
22.5°	1063.0	1067.5	1075.1	1088.7	1093.3
25°	1035.7	1041.8	1050.9	1069.1	1072.1
27.5°	1010.0	1014.5	1026.7	1046.3	1052.4
30°	978.2	985.8	1000.9	1020.6	1028.2
32.5°	947.9	955.5	973.7	994.9	1000.9
35°	910.1	920.7	941.9	966.1	973.7
37.5°	873.7	884.3	910.1	937.3	946.4
40°	835.9	848.0	875.2	907.0	919.1
42.5°	795.0	811.6	841.9	876.7	890.4
45°	754.1	769.2	807.1	846.5	861.6
47.5°	710.2	728.4	769.2	816.2	834.3
50°	663.2	686.0	732.9	784.4	804.1
52.5°	616.3	642.0	695.0	752.6	773.8
55°	570.9	595.1	658.7	720.8	743.5
57.5°	520.9	551.2	620.8	687.5	710.2
60°	469.4	502.7	583.0	652.6	676.9
62.5°	417.9	455.8	546.6	616.3	642.0
65°	366.4	408.8	504.2	578.4	604.2
67.5°	316.5	363.4	464.9	539.1	564.8
70°	258.9	318.0	422.5	495.2	520.9
72.5°	205.9	274.1	381.6	449.7	472.4
75°	159.0	231.7	336.2	398.2	407.3
77.5°	116.6	189.3	289.2	310.4	311.9
80°	78.7	151.4	221.1	218.1	221.1
82.5°	51.5	113.6	139.3	156.0	157.5
85°	30.3	66.6	81.8	90.9	92.4
87.5°	15.1	22.7	28.8	30.3	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)