

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: P309503

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-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: P309503  
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: 24FCZ2-50HE-UNV-L82765-HRP-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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**

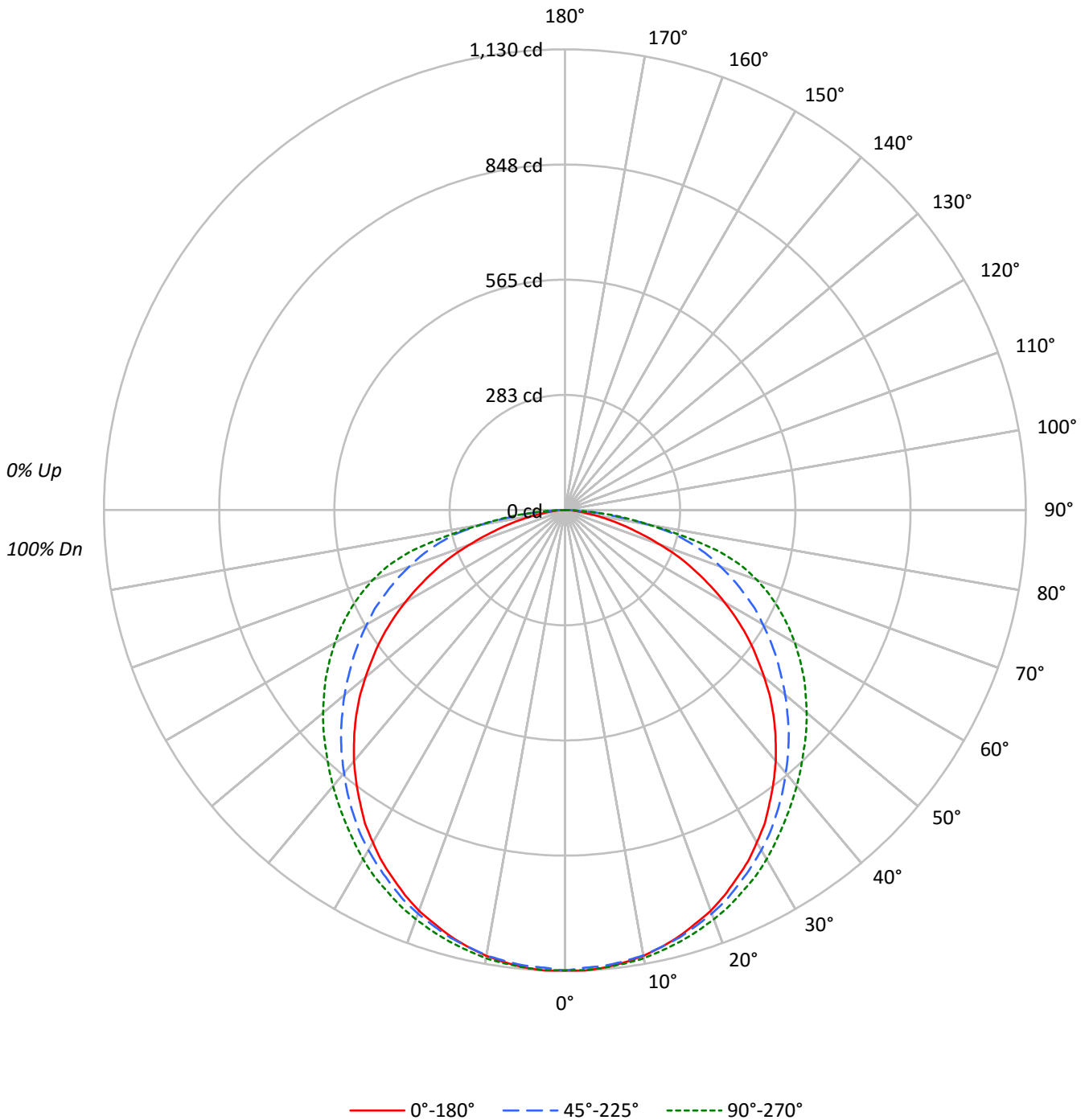
Lumens per Lamp: N/A  
Luminaire Lumens: 3480.0 lumens  
Efficiency: N/A  
Efficacy: 89.7 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	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°	1519	1519	1519
5°	1521	1515	1521
10°	1517	1515	1525
15°	1508	1512	1526
20°	1498	1508	1529
25°	1479	1501	1531
30°	1462	1496	1537
35°	1438	1488	1539
40°	1413	1479	1553
45°	1380	1478	1577
50°	1336	1476	1619
55°	1288	1487	1678
60°	1215	1509	1752
65°	1123	1544	1851
70°	980	1599	1972
75°	795	1681	2037
80°	587	1648	1648
85°	449	1215	1372



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.0	3.1
10°-20°	307.1	8.8
20°-30°	467.6	13.4
30°-40°	567.8	16.3
40°-50°	599.9	17.2
50°-60°	566.0	16.3
60°-70°	470.6	13.5
70°-80°	309.6	8.9
80°-90°	84.4	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°	881.7	25.3
0°-40°	1449.5	41.7
0°-60°	2615.4	75.2
0°-90°	3480.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3480.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1129	1129	1129	1129	1129	
5°	1126	1126	1122	1126	1126	107
15°	1082	1084	1085	1096	1096	305
25°	996	1002	1011	1029	1032	460
35°	876	886	906	930	937	548
45°	726	740	776	814	829	559
55°	549	573	634	694	715	489
65°	353	393	485	556	581	349
75°	153	223	323	383	392	165
85°	29	64	79	87	89	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1129.1	1129.1	1129.1	1129.1	1129.1
2.5°	1130.5	1129.1	1123.3	1129.1	1129.1
5°	1126.2	1126.2	1121.8	1126.2	1126.2
7.5°	1118.9	1118.9	1116.0	1121.8	1121.8
10°	1110.1	1110.1	1108.7	1116.0	1116.0
12.5°	1097.0	1098.5	1097.0	1105.8	1105.8
15°	1082.5	1083.9	1085.4	1095.6	1095.6
17.5°	1063.5	1066.4	1069.4	1081.0	1082.5
20°	1046.0	1047.5	1053.3	1066.4	1067.9
22.5°	1022.7	1027.1	1034.4	1047.5	1051.9
25°	996.5	1002.3	1011.1	1028.6	1031.5
27.5°	971.7	976.1	987.8	1006.7	1012.5
30°	941.2	948.4	963.0	981.9	989.2
32.5°	912.0	919.3	936.8	957.2	963.0
35°	875.6	885.8	906.2	929.5	936.8
37.5°	840.6	850.8	875.6	901.8	910.6
40°	804.2	815.9	842.1	872.7	884.3
42.5°	764.9	780.9	810.0	843.5	856.7
45°	725.5	740.1	776.5	814.4	829.0
47.5°	683.3	700.8	740.1	785.3	802.7
50°	638.1	660.0	705.1	754.7	773.6
52.5°	593.0	617.7	668.7	724.1	744.5
55°	549.2	572.6	633.7	693.5	715.3
57.5°	501.2	530.3	597.3	661.4	683.3
60°	451.6	483.7	560.9	627.9	651.2
62.5°	402.1	438.5	525.9	593.0	617.7
65°	352.6	393.4	485.1	556.5	581.3
67.5°	304.5	349.7	447.3	518.7	543.4
70°	249.1	305.9	406.5	476.4	501.2
72.5°	198.1	263.7	367.1	432.7	454.5
75°	153.0	222.9	323.4	383.2	391.9
77.5°	112.2	182.1	278.3	298.7	300.1
80°	75.8	145.7	212.7	209.8	212.7
82.5°	49.5	109.3	134.0	150.1	151.5
85°	29.1	64.1	78.7	87.4	88.9
87.5°	14.6	21.9	27.7	29.1	32.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)