

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: P309565

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP125-W2A-U-3500K**

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: P309565  
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-CP125-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 3500K 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: 3310.0 lumens  
Efficiency: N/A  
Efficacy: 77.2 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

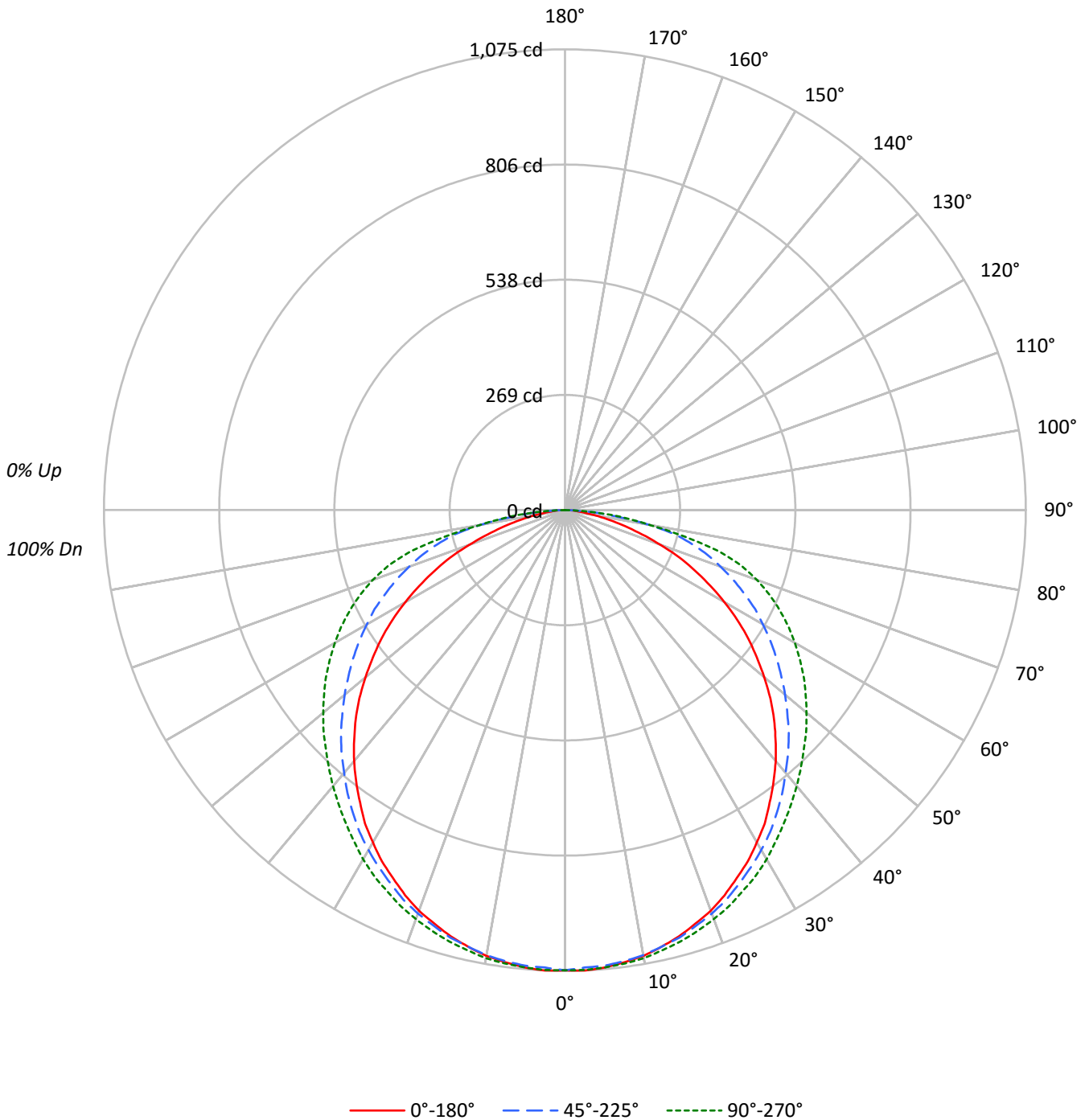
Input Watts (W): 42.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1445	1445	1445
5°	1447	1441	1447
10°	1443	1441	1450
15°	1434	1438	1452
20°	1425	1435	1454
25°	1407	1428	1457
30°	1391	1423	1462
35°	1368	1416	1464
40°	1343	1407	1477
45°	1313	1405	1500
50°	1270	1404	1540
55°	1225	1414	1596
60°	1156	1436	1667
65°	1067	1469	1760
70°	932	1521	1875
75°	756	1599	1938
80°	559	1567	1567
85°	428	1155	1304



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.7	3.1
10°-20°	292.1	8.8
20°-30°	444.8	13.4
30°-40°	540.0	16.3
40°-50°	570.5	17.2
50°-60°	538.4	16.3
60°-70°	447.6	13.5
70°-80°	294.5	8.9
80°-90°	80.3	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°	838.6	25.3
0°-40°	1378.7	41.7
0°-60°	2487.6	75.2
0°-90°	3310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3310.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1074	1074	1074	1074	1074	
5°	1071	1071	1067	1071	1071	102
15°	1030	1031	1032	1042	1042	290
25°	948	953	962	978	981	437
35°	833	842	862	884	891	521
45°	690	704	739	775	788	531
55°	522	545	603	660	680	465
65°	335	374	461	529	553	332
75°	146	212	308	364	373	157
85°	28	61	75	83	84	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1073.9	1073.9	1073.9	1073.9	1073.9
2.5°	1075.3	1073.9	1068.4	1073.9	1073.9
5°	1071.2	1071.2	1067.0	1071.2	1071.2
7.5°	1064.2	1064.2	1061.5	1067.0	1067.0
10°	1055.9	1055.9	1054.5	1061.5	1061.5
12.5°	1043.4	1044.8	1043.4	1051.8	1051.8
15°	1029.6	1031.0	1032.4	1042.1	1042.1
17.5°	1011.6	1014.3	1017.1	1028.2	1029.6
20°	994.9	996.3	1001.9	1014.3	1015.7
22.5°	972.8	976.9	983.9	996.3	1000.5
25°	947.8	953.4	961.7	978.3	981.1
27.5°	924.3	928.4	939.5	957.5	963.1
30°	895.2	902.1	916.0	934.0	940.9
32.5°	867.5	874.4	891.0	910.4	916.0
35°	832.8	842.5	861.9	884.1	891.0
37.5°	799.6	809.3	832.8	857.8	866.1
40°	764.9	776.0	800.9	830.0	841.1
42.5°	727.5	742.7	770.5	802.3	814.8
45°	690.1	703.9	738.6	774.6	788.5
47.5°	649.9	666.5	703.9	746.9	763.5
50°	606.9	627.7	670.7	717.8	735.8
52.5°	564.0	587.5	636.0	688.7	708.1
55°	522.4	544.6	602.8	659.6	680.4
57.5°	476.7	504.4	568.1	629.1	649.9
60°	429.6	460.1	533.5	597.2	619.4
62.5°	382.5	417.1	500.2	564.0	587.5
65°	335.3	374.1	461.4	529.3	552.9
67.5°	289.6	332.6	425.4	493.3	516.9
70°	237.0	291.0	386.6	453.1	476.7
72.5°	188.5	250.8	349.2	411.6	432.3
75°	145.5	212.0	307.6	364.4	372.8
77.5°	106.7	173.2	264.7	284.1	285.5
80°	72.1	138.6	202.3	199.5	202.3
82.5°	47.1	103.9	127.5	142.7	144.1
85°	27.7	61.0	74.8	83.1	84.5
87.5°	13.9	20.8	26.3	27.7	30.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)