

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: P310182

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-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: P310182
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 3222.0 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

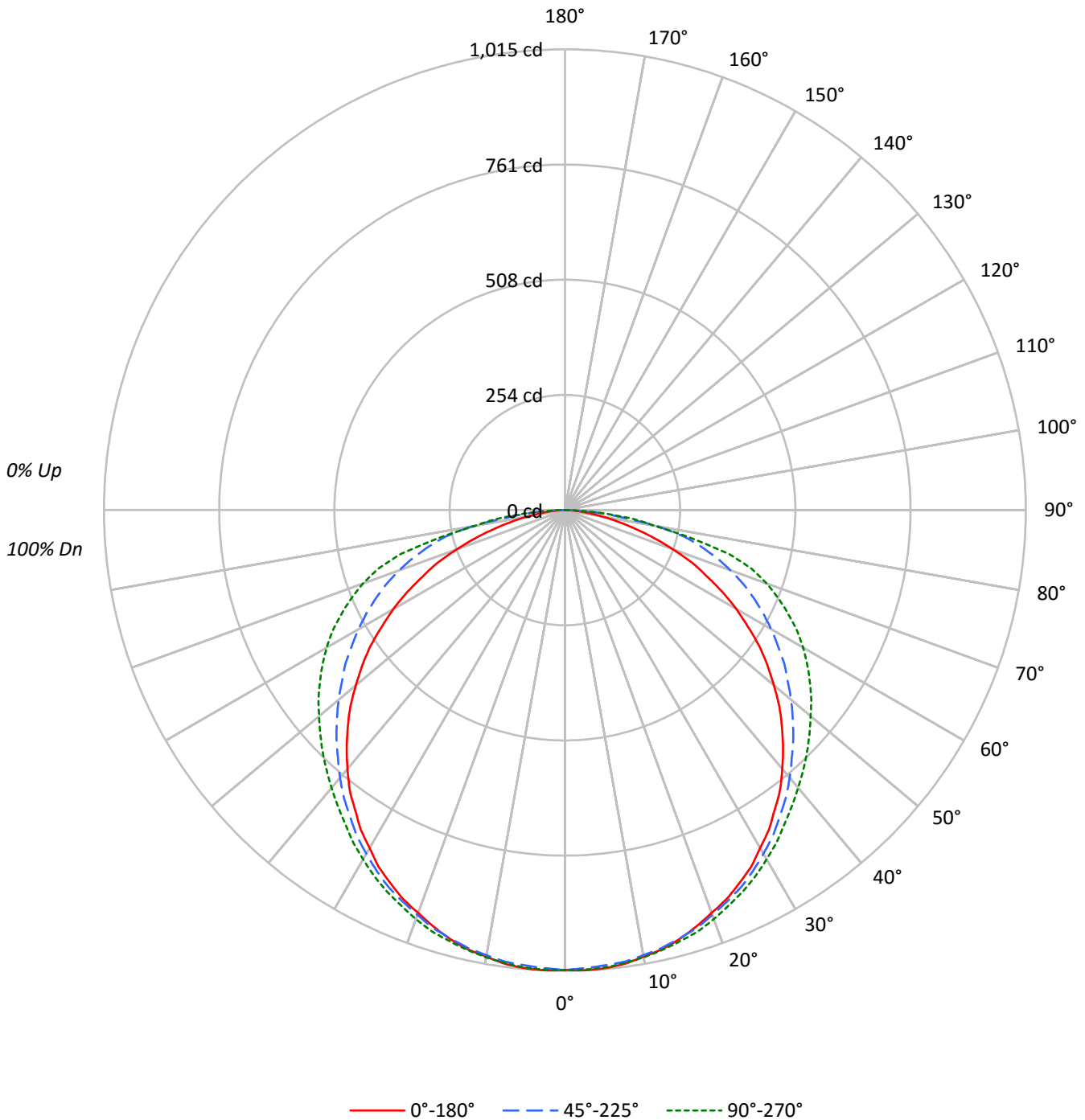
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1363	1363	1363
5°	1368	1360	1366
10°	1365	1360	1367
15°	1362	1360	1369
20°	1352	1359	1373
25°	1348	1362	1376
30°	1336	1358	1381
35°	1323	1354	1386
40°	1308	1353	1404
45°	1286	1353	1435
50°	1258	1361	1479
55°	1226	1383	1544
60°	1174	1411	1630
65°	1099	1460	1730
70°	1000	1528	1861
75°	847	1612	1944
80°	669	1623	1573
85°	494	1233	1382



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.1	3.0
10°-20°	276.6	8.6
20°-30°	423.0	13.1
30°-40°	517.1	16.0
40°-50°	551.1	17.1
50°-60°	527.0	16.4
60°-70°	446.4	13.9
70°-80°	300.0	9.3
80°-90°	84.6	2.6
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°	795.7	24.7
0°-40°	1312.8	40.7
0°-60°	2390.9	74.2
0°-90°	3222.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3222.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1013	1013	1013	1013	1013	
5°	1013	1012	1007	1012	1012	96
15°	978	978	976	984	983	276
25°	908	911	917	925	927	418
35°	806	812	825	841	844	505
45°	676	687	711	742	754	521
55°	523	542	590	636	658	465
65°	345	380	459	519	543	343
75°	163	222	310	363	374	175
85°	32	66	80	86	90	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1013.2	1013.2	1013.2	1013.2	1013.2
2.5°	1014.8	1014.8	1010.0	1013.2	1013.2
5°	1013.2	1011.6	1006.8	1011.6	1011.6
7.5°	1008.4	1006.8	1003.6	1008.4	1006.8
10°	998.8	998.8	995.6	1000.4	1000.4
12.5°	990.9	989.3	987.7	994.0	992.5
15°	978.1	978.1	976.5	984.5	982.9
17.5°	962.1	963.7	965.3	971.7	973.3
20°	944.5	947.7	949.3	958.9	958.9
22.5°	928.5	930.1	933.3	942.9	942.9
25°	907.7	910.9	917.3	925.3	926.9
27.5°	887.0	888.6	896.6	907.7	909.3
30°	859.8	864.6	874.2	887.0	888.6
32.5°	835.8	840.6	851.8	864.6	867.8
35°	805.5	811.9	824.6	840.6	843.8
37.5°	778.3	783.1	799.1	816.7	821.4
40°	744.7	754.3	770.3	791.1	799.1
42.5°	711.2	720.8	739.9	767.1	776.7
45°	676.0	687.2	711.2	741.5	754.3
47.5°	640.9	653.6	680.8	716.0	730.4
50°	600.9	616.9	650.4	690.4	706.4
52.5°	562.5	581.7	618.5	663.2	684.0
55°	522.6	541.8	589.7	636.1	658.4
57.5°	477.8	503.4	556.2	608.9	632.9
60°	436.3	460.3	524.2	581.7	605.7
62.5°	391.5	423.5	492.2	553.0	576.9
65°	345.2	380.4	458.7	519.4	543.4
67.5°	303.6	342.0	425.1	485.8	509.8
70°	254.1	302.1	388.4	449.1	473.1
72.5°	207.8	260.5	350.0	409.1	431.5
75°	163.0	222.1	310.0	362.8	374.0
77.5°	121.5	183.8	268.5	290.9	282.9
80°	86.3	147.0	209.4	198.2	203.0
82.5°	55.9	111.9	129.5	147.0	151.8
85°	32.0	65.5	79.9	86.3	89.5
87.5°	14.4	24.0	32.0	32.0	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)