

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: P313289

Luminaire Tested: **24FCZ2-50-UNV-L83050-HRP-CP250-W2A-U-5000K**

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: P313289
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-L83050-HRP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 5000K 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: 3495.0 lumens
Efficiency: N/A
Efficacy: 78.0 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

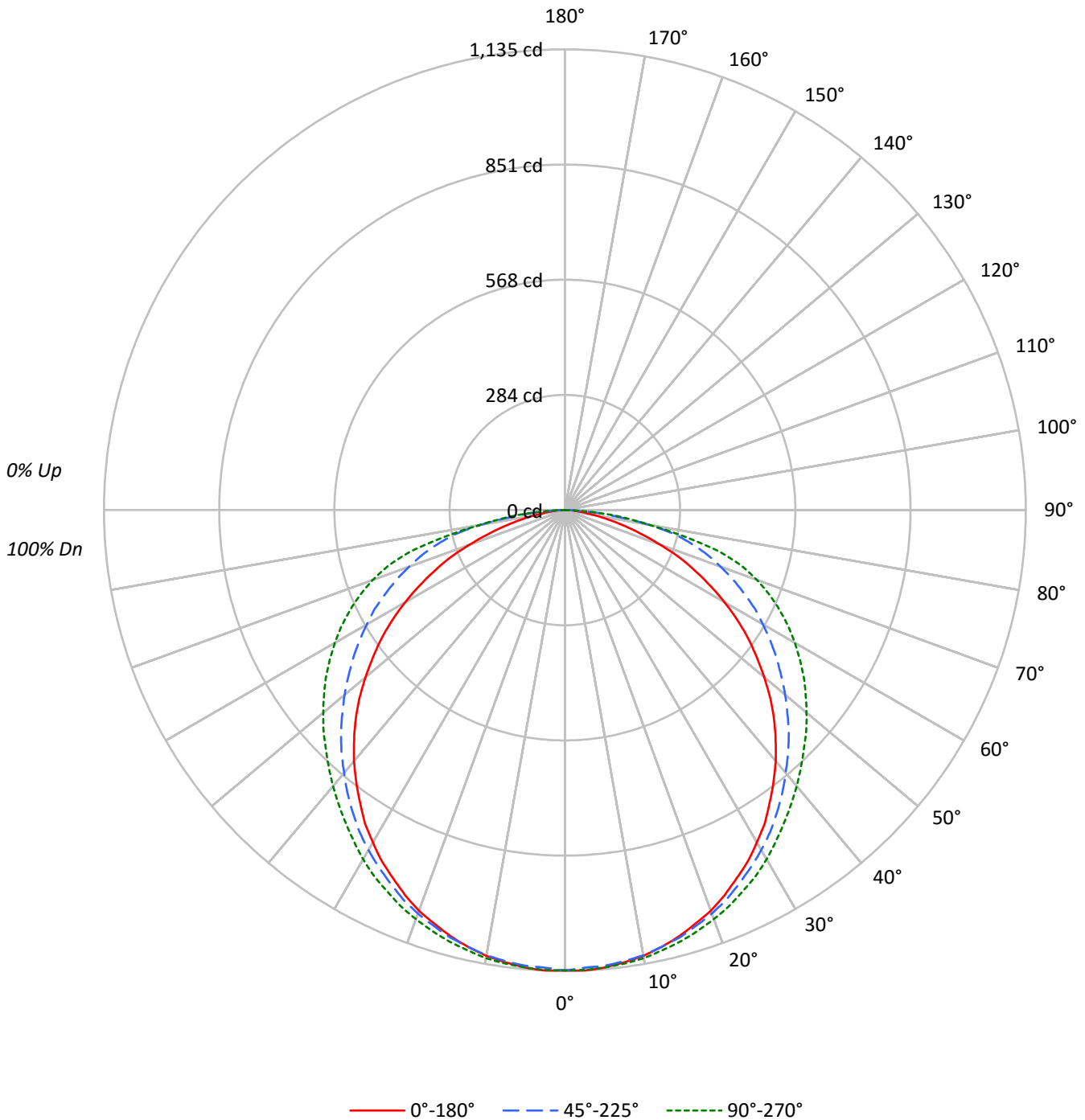
Input Watts (W): 44.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1526	1526	1526
5°	1528	1522	1528
10°	1523	1521	1531
15°	1514	1518	1533
20°	1504	1515	1536
25°	1486	1507	1538
30°	1468	1503	1544
35°	1444	1495	1545
40°	1419	1485	1560
45°	1387	1484	1584
50°	1342	1482	1626
55°	1294	1493	1685
60°	1221	1516	1760
65°	1127	1551	1859
70°	984	1606	1980
75°	799	1688	2046
80°	590	1655	1655
85°	452	1220	1379



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.4	3.1
10°-20°	308.5	8.8
20°-30°	469.6	13.4
30°-40°	570.2	16.3
40°-50°	602.4	17.2
50°-60°	568.5	16.3
60°-70°	472.7	13.5
70°-80°	311.0	8.9
80°-90°	84.8	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°	885.5	25.3
0°-40°	1455.7	41.7
0°-60°	2626.6	75.2
0°-90°	3495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3495.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1134	1134	1134	1134	1134	
5°	1131	1131	1127	1131	1131	107
15°	1087	1089	1090	1100	1100	307
25°	1001	1007	1015	1033	1036	462
35°	879	890	910	934	941	550
45°	729	743	780	818	832	561
55°	552	575	636	696	718	491
65°	354	395	487	559	584	350
75°	154	224	325	385	394	166
85°	29	64	79	88	89	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1134.0	1134.0	1134.0	1134.0	1134.0
2.5°	1135.4	1134.0	1128.1	1134.0	1134.0
5°	1131.0	1131.0	1126.6	1131.0	1131.0
7.5°	1123.7	1123.7	1120.8	1126.6	1126.6
10°	1114.9	1114.9	1113.5	1120.8	1120.8
12.5°	1101.8	1103.2	1101.8	1110.5	1110.5
15°	1087.1	1088.6	1090.1	1100.3	1100.3
17.5°	1068.1	1071.0	1074.0	1085.7	1087.1
20°	1050.6	1052.0	1057.9	1071.0	1072.5
22.5°	1027.1	1031.5	1038.8	1052.0	1056.4
25°	1000.8	1006.7	1015.4	1033.0	1035.9
27.5°	975.9	980.3	992.0	1011.0	1016.9
30°	945.2	952.5	967.2	986.2	993.5
32.5°	915.9	923.3	940.8	961.3	967.2
35°	879.4	889.6	910.1	933.5	940.8
37.5°	844.2	854.5	879.4	905.7	914.5
40°	807.7	819.4	845.7	876.4	888.1
42.5°	768.2	784.3	813.5	847.2	860.3
45°	728.7	743.3	779.9	817.9	832.5
47.5°	686.2	703.8	743.3	788.6	806.2
50°	640.9	662.8	708.2	757.9	776.9
52.5°	595.5	620.4	671.6	727.2	747.7
55°	551.6	575.0	636.5	696.5	718.4
57.5°	503.3	532.6	599.9	664.3	686.2
60°	453.6	485.8	563.3	630.6	654.0
62.5°	403.8	440.4	528.2	595.5	620.4
65°	354.1	395.1	487.2	558.9	583.8
67.5°	305.8	351.2	449.2	520.9	545.8
70°	250.2	307.3	408.2	478.5	503.3
72.5°	199.0	264.8	368.7	434.6	456.5
75°	153.6	223.9	324.8	384.8	393.6
77.5°	112.7	182.9	279.5	299.9	301.4
80°	76.1	146.3	213.6	210.7	213.6
82.5°	49.7	109.7	134.6	150.7	152.2
85°	29.3	64.4	79.0	87.8	89.3
87.5°	14.6	21.9	27.8	29.3	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)