

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: P309512

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CA125-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: P309512
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 3467.0 lumens
Efficiency: N/A
Efficacy: 89.4 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

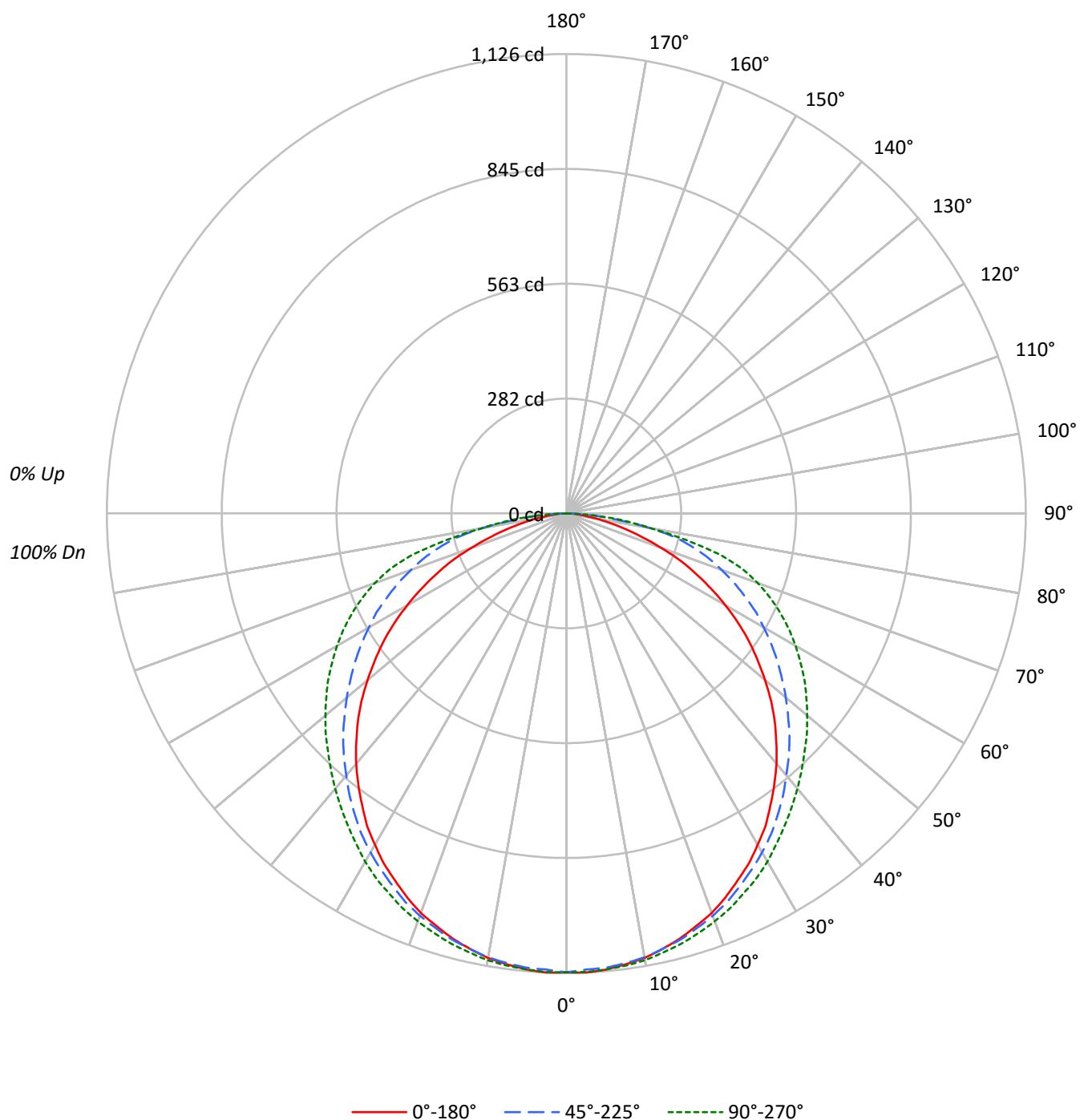
Input Watts (W): 38.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1514	1514	1514
5°	1515	1509	1515
10°	1511	1509	1519
15°	1502	1506	1520
20°	1492	1503	1523
25°	1474	1495	1526
30°	1457	1491	1531
35°	1433	1483	1533
40°	1407	1473	1547
45°	1375	1472	1572
50°	1331	1470	1613
55°	1284	1481	1672
60°	1211	1504	1746
65°	1118	1539	1844
70°	976	1593	1964
75°	792	1675	2030
80°	585	1642	1642
85°	448	1210	1366



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.6	3.1
10°-20°	306.0	8.8
20°-30°	465.8	13.4
30°-40°	565.6	16.3
40°-50°	597.6	17.2
50°-60°	563.9	16.3
60°-70°	468.9	13.5
70°-80°	308.5	8.9
80°-90°	84.1	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°	878.4	25.3
0°-40°	1444.1	41.7
0°-60°	2605.6	75.2
0°-90°	3467.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3467.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1125	1125	1125	1125	1125	
5°	1122	1122	1118	1122	1122	107
15°	1078	1080	1081	1092	1092	304
25°	993	999	1007	1025	1028	458
35°	872	882	903	926	933	546
45°	723	737	774	811	826	557
55°	547	570	631	691	713	487
65°	351	392	483	554	579	347
75°	152	222	322	382	390	164
85°	29	64	78	87	88	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1124.9	1124.9	1124.9	1124.9	1124.9
2.5°	1126.3	1124.9	1119.1	1124.9	1124.9
5°	1122.0	1122.0	1117.6	1122.0	1122.0
7.5°	1114.7	1114.7	1111.8	1117.6	1117.6
10°	1106.0	1106.0	1104.6	1111.8	1111.8
12.5°	1092.9	1094.4	1092.9	1101.6	1101.6
15°	1078.4	1079.9	1081.3	1091.5	1091.5
17.5°	1059.6	1062.5	1065.4	1077.0	1078.4
20°	1042.1	1043.6	1049.4	1062.5	1063.9
22.5°	1018.9	1023.3	1030.5	1043.6	1047.9
25°	992.8	998.6	1007.3	1024.7	1027.6
27.5°	968.1	972.5	984.1	1002.9	1008.8
30°	937.6	944.9	959.4	978.3	985.5
32.5°	908.6	915.9	933.3	953.6	959.4
35°	872.3	882.5	902.8	926.0	933.3
37.5°	837.5	847.6	872.3	898.4	907.2
40°	801.2	812.8	838.9	869.4	881.0
42.5°	762.0	778.0	807.0	840.4	853.5
45°	722.8	737.3	773.6	811.4	825.9
47.5°	680.7	698.1	737.3	782.3	799.7
50°	635.7	657.5	702.5	751.8	770.7
52.5°	590.7	615.4	666.2	721.4	741.7
55°	547.2	570.4	631.4	690.9	712.7
57.5°	499.3	528.3	595.1	659.0	680.7
60°	449.9	481.9	558.8	625.6	648.8
62.5°	400.6	436.9	524.0	590.7	615.4
65°	351.2	391.9	483.3	554.5	579.1
67.5°	303.4	348.3	445.6	516.7	541.4
70°	248.2	304.8	405.0	474.6	499.3
72.5°	197.4	262.7	365.8	431.1	452.9
75°	152.4	222.1	322.2	381.7	390.4
77.5°	111.8	181.4	277.2	297.5	299.0
80°	75.5	145.1	211.9	209.0	211.9
82.5°	49.3	108.9	133.5	149.5	151.0
85°	29.0	63.9	78.4	87.1	88.5
87.5°	14.5	21.8	27.6	29.0	31.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)