

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: P313266

Luminaire Tested: **24FCZ2-50-UNV-L83050-HRP-CA08-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: P313266
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 3553.0 lumens
Efficiency: N/A
Efficacy: 83.2 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

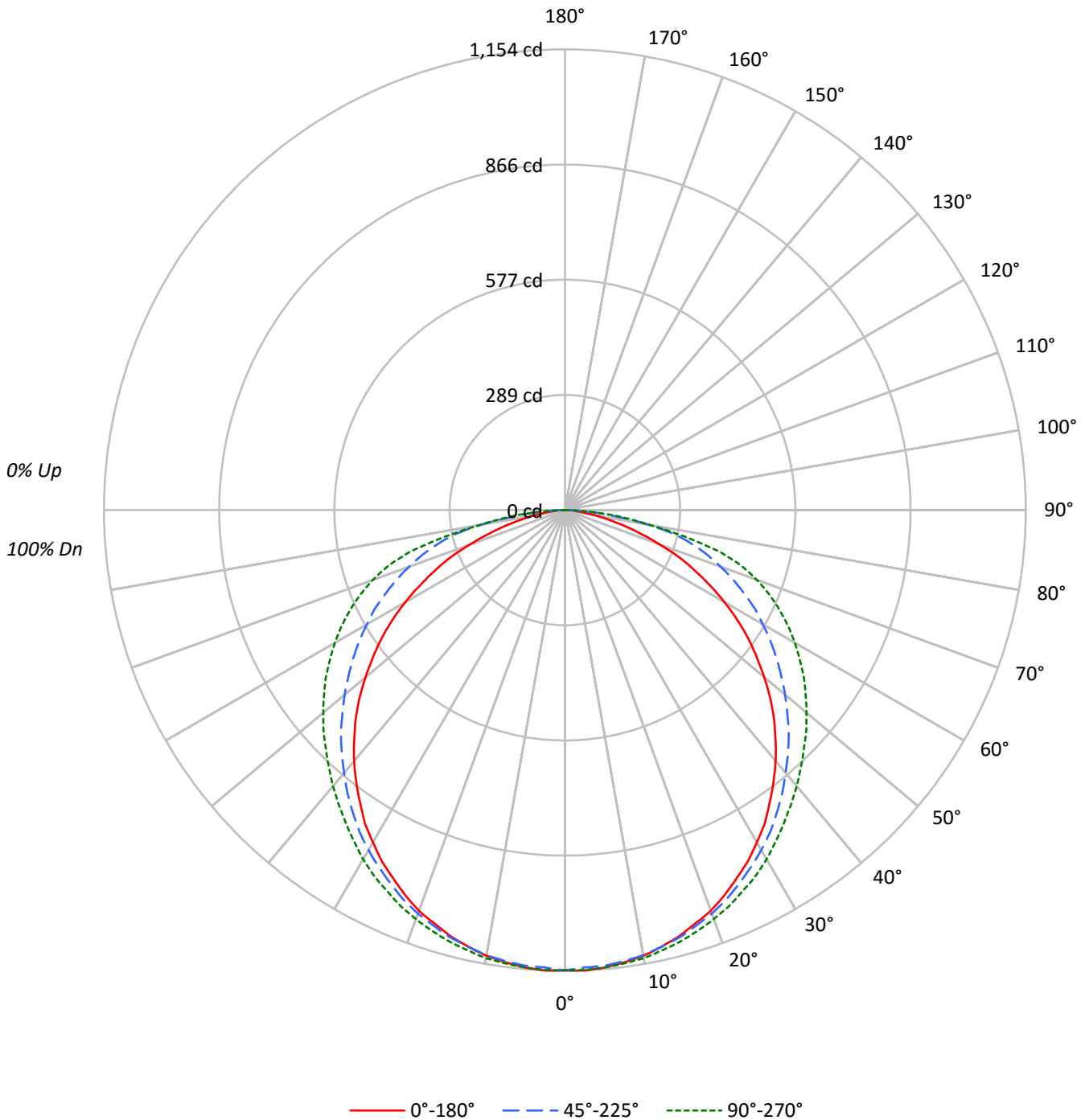
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1551	1551	1551
5°	1553	1547	1553
10°	1549	1546	1557
15°	1539	1544	1558
20°	1529	1540	1561
25°	1510	1533	1563
30°	1493	1528	1569
35°	1468	1520	1571
40°	1442	1510	1586
45°	1410	1509	1611
50°	1364	1507	1653
55°	1316	1518	1713
60°	1241	1541	1789
65°	1146	1577	1890
70°	1001	1633	2013
75°	812	1717	2080
80°	599	1683	1683
85°	459	1240	1400



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.2	3.1
10°-20°	313.6	8.8
20°-30°	477.4	13.4
30°-40°	579.7	16.3
40°-50°	612.4	17.2
50°-60°	577.9	16.3
60°-70°	480.5	13.5
70°-80°	316.1	8.9
80°-90°	86.2	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°	900.2	25.3
0°-40°	1479.9	41.7
0°-60°	2670.2	75.2
0°-90°	3553.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3553.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1153	1153	1153	1153	1153	
5°	1150	1150	1145	1150	1150	109
15°	1105	1107	1108	1119	1119	312
25°	1017	1023	1032	1050	1053	469
35°	894	904	925	949	956	560
45°	741	756	793	832	846	570
55°	561	585	647	708	730	499
65°	360	402	495	568	594	356
75°	156	228	330	391	400	168
85°	30	65	80	89	91	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1152.8	1152.8	1152.8	1152.8	1152.8
2.5°	1154.3	1152.8	1146.8	1152.8	1152.8
5°	1149.8	1149.8	1145.3	1149.8	1149.8
7.5°	1142.4	1142.4	1139.4	1145.3	1145.3
10°	1133.4	1133.4	1131.9	1139.4	1139.4
12.5°	1120.0	1121.5	1120.0	1129.0	1129.0
15°	1105.2	1106.7	1108.2	1118.6	1118.6
17.5°	1085.8	1088.8	1091.8	1103.7	1105.2
20°	1068.0	1069.5	1075.4	1088.8	1090.3
22.5°	1044.2	1048.7	1056.1	1069.5	1073.9
25°	1017.4	1023.4	1032.3	1050.1	1053.1
27.5°	992.1	996.6	1008.5	1027.8	1033.8
30°	960.9	968.3	983.2	1002.5	1010.0
32.5°	931.1	938.6	956.4	977.3	983.2
35°	894.0	904.4	925.2	949.0	956.4
37.5°	858.3	868.7	894.0	920.7	929.7
40°	821.1	833.0	859.7	891.0	902.9
42.5°	780.9	797.3	827.0	861.2	874.6
45°	740.8	755.6	792.8	831.5	846.4
47.5°	697.6	715.5	755.6	801.7	819.6
50°	651.5	673.8	719.9	770.5	789.8
52.5°	605.4	630.7	682.7	739.3	760.1
55°	560.8	584.6	647.0	708.0	730.3
57.5°	511.7	541.4	609.9	675.3	697.6
60°	461.1	493.8	572.7	641.1	664.9
62.5°	410.5	447.7	537.0	605.4	630.7
65°	360.0	401.6	495.3	568.2	593.5
67.5°	310.9	357.0	456.6	529.5	554.8
70°	254.4	312.4	415.0	486.4	511.7
72.5°	202.3	269.2	374.8	441.8	464.1
75°	156.2	227.6	330.2	391.2	400.1
77.5°	114.5	185.9	284.1	304.9	306.4
80°	77.3	148.7	217.2	214.2	217.2
82.5°	50.6	111.6	136.8	153.2	154.7
85°	29.7	65.4	80.3	89.2	90.7
87.5°	14.9	22.3	28.3	29.7	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)