

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: P313241

Luminaire Tested: **24FCZ2-50HE-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: P313241
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-L83050-HRP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 3570.0 lumens
Efficiency: N/A
Efficacy: 93.0 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

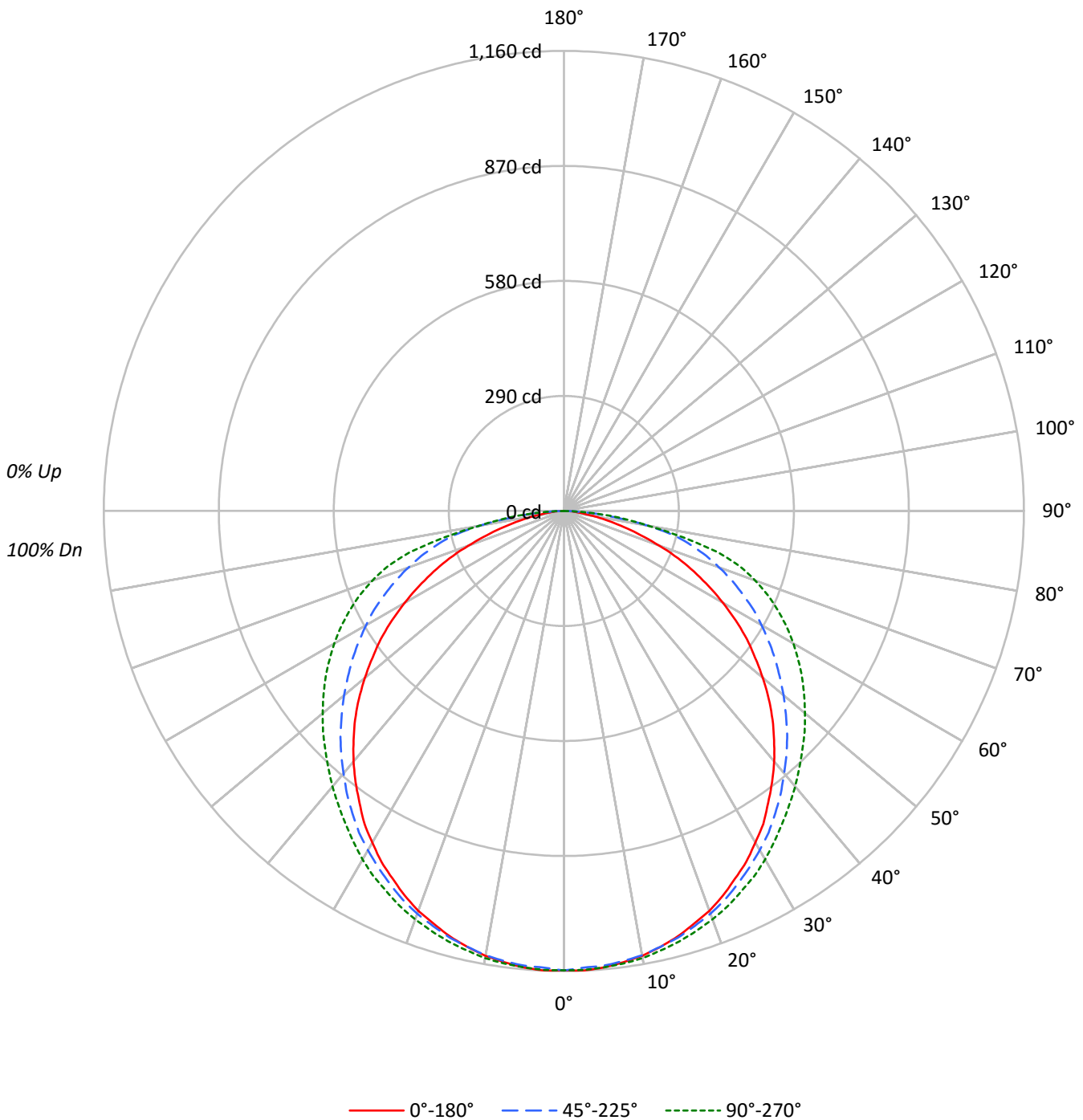
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313241

CATALOG NUMBER: 24FCZ2-50HE-UNV-L83050-HRP-CA08-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P313241

CATALOG NUMBER: 24FCZ2-50HE-UNV-L83050-HRP-CA08-W2A-U-3500K

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°	1558	1558	1558
5°	1560	1554	1560
10°	1556	1554	1564
15°	1547	1551	1566
20°	1537	1547	1569
25°	1518	1540	1571
30°	1500	1535	1577
35°	1475	1527	1578
40°	1449	1517	1593
45°	1416	1516	1618
50°	1370	1514	1661
55°	1322	1525	1721
60°	1247	1548	1798
65°	1152	1585	1898
70°	1006	1640	2022
75°	816	1725	2090
80°	602	1691	1691
85°	462	1246	1408



TEST NUMBER: P313241

CATALOG NUMBER: 24FCZ2-50HE-UNV-L83050-HRP-CA08-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.7	3.1
10°-20°	315.1	8.8
20°-30°	479.7	13.4
30°-40°	582.4	16.3
40°-50°	615.4	17.2
50°-60°	580.7	16.3
60°-70°	482.8	13.5
70°-80°	317.6	8.9
80°-90°	86.6	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°	904.5	25.3
0°-40°	1487.0	41.7
0°-60°	2683.0	75.2
0°-90°	3570.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3570.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1158	1158	1158	1158	1158	
5°	1155	1155	1151	1155	1155	110
15°	1110	1112	1114	1124	1124	313
25°	1022	1028	1037	1055	1058	472
35°	898	909	930	954	961	562
45°	744	759	797	836	850	573
55°	564	587	650	711	734	502
65°	362	404	498	571	596	358
75°	157	229	332	393	402	169
85°	30	66	81	90	91	37
90°	0	0	0	0	0	



TEST NUMBER: P313241

CATALOG NUMBER: 24FCZ2-50HE-UNV-L83050-HRP-CA08-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1158.3	1158.3	1158.3	1158.3	1158.3
2.5°	1159.8	1158.3	1152.3	1158.3	1158.3
5°	1155.3	1155.3	1150.8	1155.3	1155.3
7.5°	1147.8	1147.8	1144.8	1150.8	1150.8
10°	1138.9	1138.9	1137.4	1144.8	1144.8
12.5°	1125.4	1126.9	1125.4	1134.4	1134.4
15°	1110.5	1112.0	1113.5	1123.9	1123.9
17.5°	1091.0	1094.0	1097.0	1109.0	1110.5
20°	1073.1	1074.6	1080.6	1094.0	1095.5
22.5°	1049.2	1053.7	1061.1	1074.6	1079.1
25°	1022.3	1028.3	1037.2	1055.2	1058.2
27.5°	996.9	1001.4	1013.3	1032.7	1038.7
30°	965.5	973.0	987.9	1007.3	1014.8
32.5°	935.6	943.1	961.0	981.9	987.9
35°	898.2	908.7	929.6	953.5	961.0
37.5°	862.4	872.8	898.2	925.1	934.1
40°	825.0	837.0	863.9	895.2	907.2
42.5°	784.6	801.1	831.0	865.4	878.8
45°	744.3	759.2	796.6	835.5	850.4
47.5°	701.0	718.9	759.2	805.6	823.5
50°	654.6	677.0	723.4	774.2	793.6
52.5°	608.3	633.7	686.0	742.8	763.7
55°	563.5	587.4	650.1	711.4	733.8
57.5°	514.1	544.0	612.8	678.5	701.0
60°	463.3	496.2	575.4	644.2	668.1
62.5°	412.5	449.9	539.5	608.3	633.7
65°	361.7	403.5	497.7	570.9	596.3
67.5°	312.4	358.7	458.8	532.1	557.5
70°	255.6	313.9	417.0	488.7	514.1
72.5°	203.3	270.5	376.6	443.9	466.3
75°	156.9	228.7	331.8	393.1	402.0
77.5°	115.1	186.8	285.5	306.4	307.9
80°	77.7	149.5	218.2	215.2	218.2
82.5°	50.8	112.1	137.5	153.9	155.4
85°	29.9	65.8	80.7	89.7	91.2
87.5°	14.9	22.4	28.4	29.9	32.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)