

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: P313310

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3000K**

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: P313310
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: 24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 3000K 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: 3457.0 lumens
Efficiency: N/A
Efficacy: 80.4 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

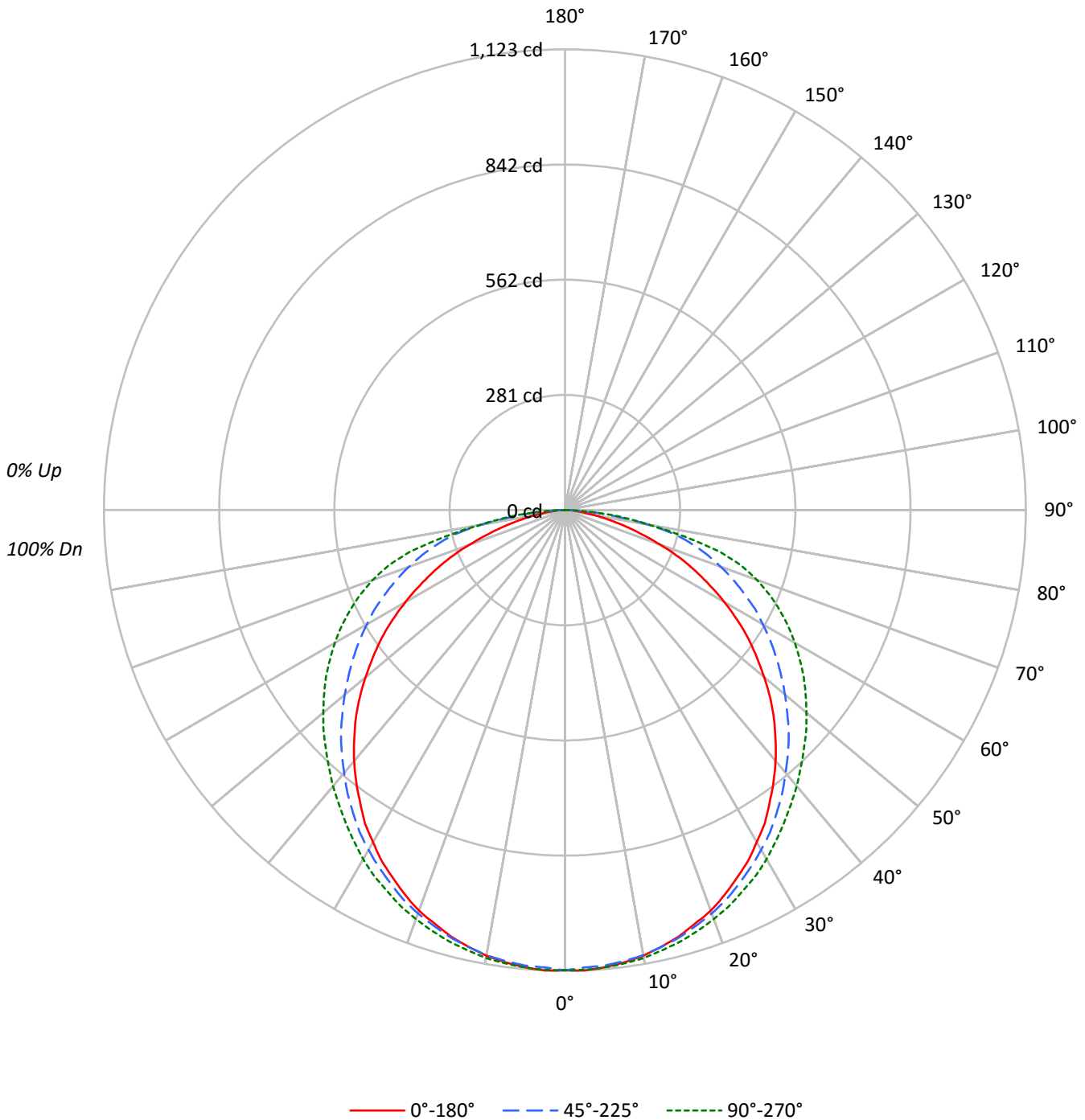
Input Watts (W): 43
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313310

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P313310

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3000K

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°	1509	1509	1509
5°	1511	1505	1511
10°	1507	1505	1515
15°	1498	1502	1516
20°	1488	1498	1519
25°	1470	1491	1521
30°	1452	1486	1527
35°	1429	1479	1529
40°	1403	1469	1543
45°	1371	1468	1567
50°	1327	1466	1609
55°	1280	1477	1667
60°	1207	1499	1741
65°	1115	1534	1839
70°	974	1589	1959
75°	790	1670	2024
80°	583	1637	1637
85°	446	1207	1363



TEST NUMBER: P313310

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.3	3.1
10°-20°	305.1	8.8
20°-30°	464.5	13.4
30°-40°	564.0	16.3
40°-50°	595.9	17.2
50°-60°	562.3	16.3
60°-70°	467.5	13.5
70°-80°	307.6	8.9
80°-90°	83.8	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°	875.9	25.3
0°-40°	1439.9	41.7
0°-60°	2598.1	75.2
0°-90°	3457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3457.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1122	1122	1122	1122	1122	
5°	1119	1119	1114	1119	1119	106
15°	1075	1077	1078	1088	1088	303
25°	990	996	1004	1022	1025	457
35°	870	880	900	923	931	544
45°	721	735	771	809	824	555
55°	546	569	630	689	711	486
65°	350	391	482	553	578	346
75°	152	221	321	381	389	164
85°	29	64	78	87	88	35
90°	0	0	0	0	0	



TEST NUMBER: P313310

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1121.6	1121.6	1121.6	1121.6	1121.6
2.5°	1123.1	1121.6	1115.8	1121.6	1121.6
5°	1118.7	1118.7	1114.4	1118.7	1118.7
7.5°	1111.5	1111.5	1108.6	1114.4	1114.4
10°	1102.8	1102.8	1101.4	1108.6	1108.6
12.5°	1089.8	1091.2	1089.8	1098.5	1098.5
15°	1075.3	1076.8	1078.2	1088.3	1088.3
17.5°	1056.5	1059.4	1062.3	1073.9	1075.3
20°	1039.1	1040.6	1046.4	1059.4	1060.8
22.5°	1016.0	1020.3	1027.6	1040.6	1044.9
25°	989.9	995.7	1004.4	1021.8	1024.7
27.5°	965.3	969.7	981.2	1000.1	1005.8
30°	934.9	942.2	956.6	975.5	982.7
32.5°	906.0	913.2	930.6	950.8	956.6
35°	869.8	879.9	900.2	923.4	930.6
37.5°	835.1	845.2	869.8	895.9	904.5
40°	798.9	810.5	836.5	866.9	878.5
42.5°	759.8	775.7	804.7	838.0	851.0
45°	720.7	735.2	771.4	809.0	823.5
47.5°	678.8	696.1	735.2	780.1	797.4
50°	633.9	655.6	700.5	749.7	768.5
52.5°	589.0	613.6	664.3	719.3	739.5
55°	545.6	568.8	629.6	688.9	710.6
57.5°	497.9	526.8	593.4	657.1	678.8
60°	448.7	480.5	557.2	623.8	646.9
62.5°	399.4	435.6	522.5	589.0	613.6
65°	350.2	390.8	481.9	552.9	577.5
67.5°	302.5	347.3	444.3	515.2	539.8
70°	247.5	303.9	403.8	473.3	497.9
72.5°	196.8	262.0	364.7	429.8	451.5
75°	152.0	221.4	321.3	380.6	389.3
77.5°	111.4	180.9	276.4	296.7	298.1
80°	75.3	144.7	211.3	208.4	211.3
82.5°	49.2	108.5	133.1	149.1	150.5
85°	28.9	63.7	78.2	86.8	88.3
87.5°	14.5	21.7	27.5	28.9	31.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)