

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: P313276

Luminaire Tested: **24FCZ2-50-UNV-L83050-HRP-CP125-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: P313276
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB 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: 3471.0 lumens
Efficiency: N/A
Efficacy: 81.3 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

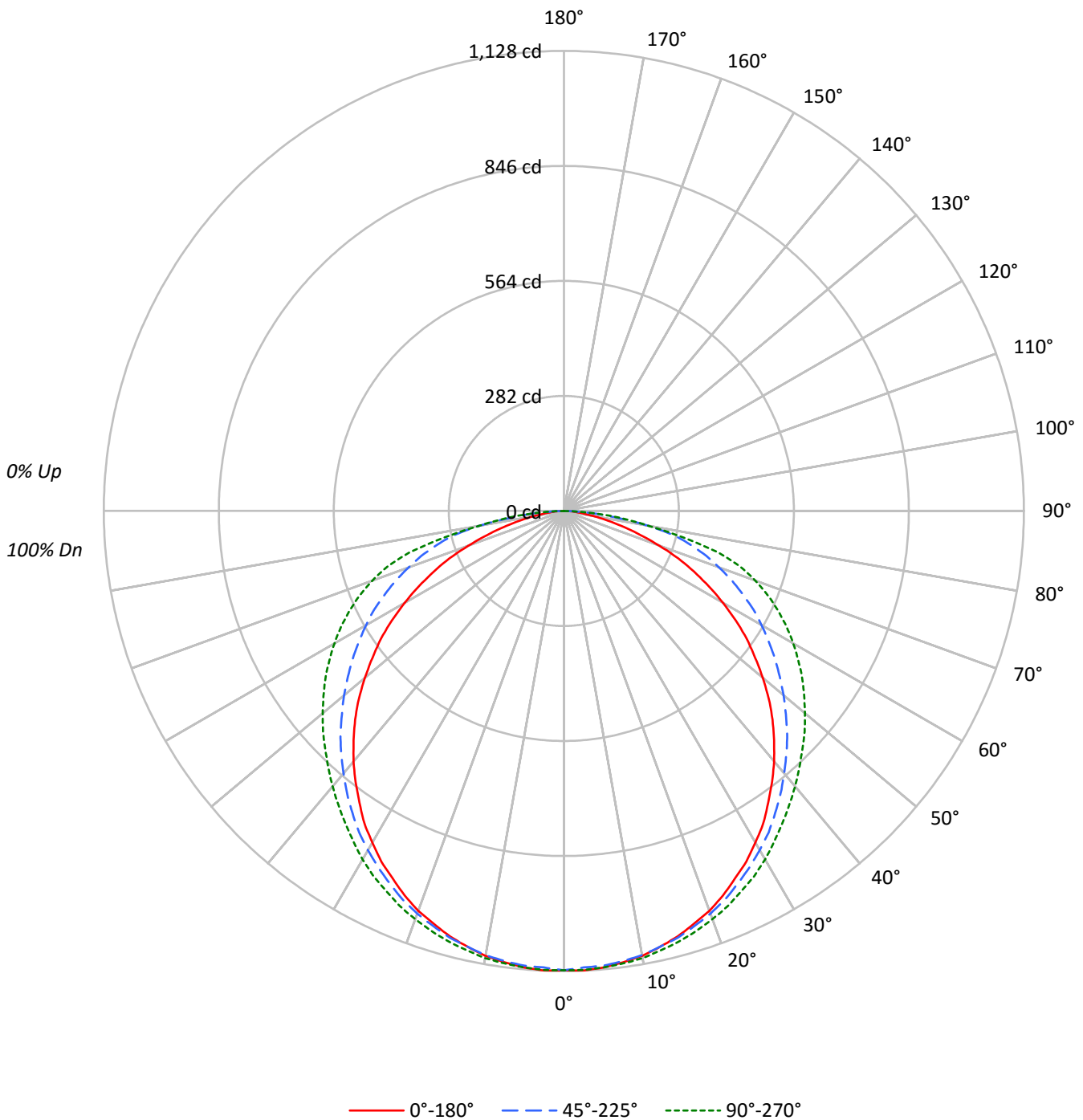
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313276

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-HRP-CP125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P313276

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-HRP-CP125-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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82				82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67				67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56				56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48				48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1515	1515	1515
5°	1517	1511	1517
10°	1513	1511	1521
15°	1504	1508	1522
20°	1494	1504	1525
25°	1476	1497	1527
30°	1458	1492	1533
35°	1434	1485	1535
40°	1409	1475	1549
45°	1377	1474	1573
50°	1332	1472	1615
55°	1285	1483	1674
60°	1212	1506	1748
65°	1120	1541	1846
70°	978	1595	1967
75°	793	1677	2032
80°	586	1644	1644
85°	449	1212	1368



TEST NUMBER: P313276

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-HRP-CP125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.7	3.1
10°-20°	306.4	8.8
20°-30°	466.4	13.4
30°-40°	566.3	16.3
40°-50°	598.3	17.2
50°-60°	564.6	16.3
60°-70°	469.4	13.5
70°-80°	308.8	8.9
80°-90°	84.2	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°	879.4	25.3
0°-40°	1445.7	41.7
0°-60°	2608.6	75.2
0°-90°	3471.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1126	1126	1126	1126	1126	
5°	1123	1123	1119	1123	1123	107
15°	1080	1081	1083	1093	1093	304
25°	994	1000	1008	1026	1029	458
35°	873	884	904	927	934	547
45°	724	738	774	812	827	557
55°	548	571	632	692	714	488
65°	352	392	484	555	580	348
75°	153	222	323	382	391	164
85°	29	64	78	87	89	36
90°	0	0	0	0	0	



TEST NUMBER: P313276

CATALOG NUMBER: 24FC22-50-UNV-L83050-HRP-CP125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1126.2	1126.2	1126.2	1126.2	1126.2
2.5°	1127.6	1126.2	1120.4	1126.2	1126.2
5°	1123.3	1123.3	1118.9	1123.3	1123.3
7.5°	1116.0	1116.0	1113.1	1118.9	1118.9
10°	1107.3	1107.3	1105.8	1113.1	1113.1
12.5°	1094.2	1095.7	1094.2	1102.9	1102.9
15°	1079.7	1081.1	1082.6	1092.7	1092.7
17.5°	1060.8	1063.7	1066.6	1078.2	1079.7
20°	1043.3	1044.8	1050.6	1063.7	1065.1
22.5°	1020.1	1024.5	1031.7	1044.8	1049.2
25°	993.9	999.7	1008.5	1025.9	1028.8
27.5°	969.2	973.6	985.2	1004.1	1009.9
30°	938.7	946.0	960.5	979.4	986.7
32.5°	909.7	916.9	934.4	954.7	960.5
35°	873.3	883.5	903.8	927.1	934.4
37.5°	838.5	848.6	873.3	899.5	908.2
40°	802.1	813.7	839.9	870.4	882.0
42.5°	762.9	778.9	807.9	841.4	854.4
45°	723.7	738.2	774.5	812.3	826.8
47.5°	681.5	699.0	738.2	783.2	800.7
50°	636.5	658.3	703.3	752.7	771.6
52.5°	591.4	616.1	667.0	722.2	742.5
55°	547.8	571.1	632.1	691.7	713.5
57.5°	499.9	528.9	595.8	659.7	681.5
60°	450.5	482.4	559.5	626.3	649.5
62.5°	401.1	437.4	524.6	591.4	616.1
65°	351.7	392.3	483.9	555.1	579.8
67.5°	303.7	348.7	446.1	517.3	542.0
70°	248.5	305.2	405.4	475.2	499.9
72.5°	197.6	263.0	366.2	431.6	453.4
75°	152.6	222.3	322.6	382.2	390.9
77.5°	111.9	181.6	277.5	297.9	299.3
80°	75.6	145.3	212.2	209.2	212.2
82.5°	49.4	109.0	133.7	149.7	151.1
85°	29.1	63.9	78.5	87.2	88.6
87.5°	14.5	21.8	27.6	29.1	32.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)