

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: P313240

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-HRP-CA08-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: P313240
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-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 3373.0 lumens
Efficiency: N/A
Efficacy: 88.1 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

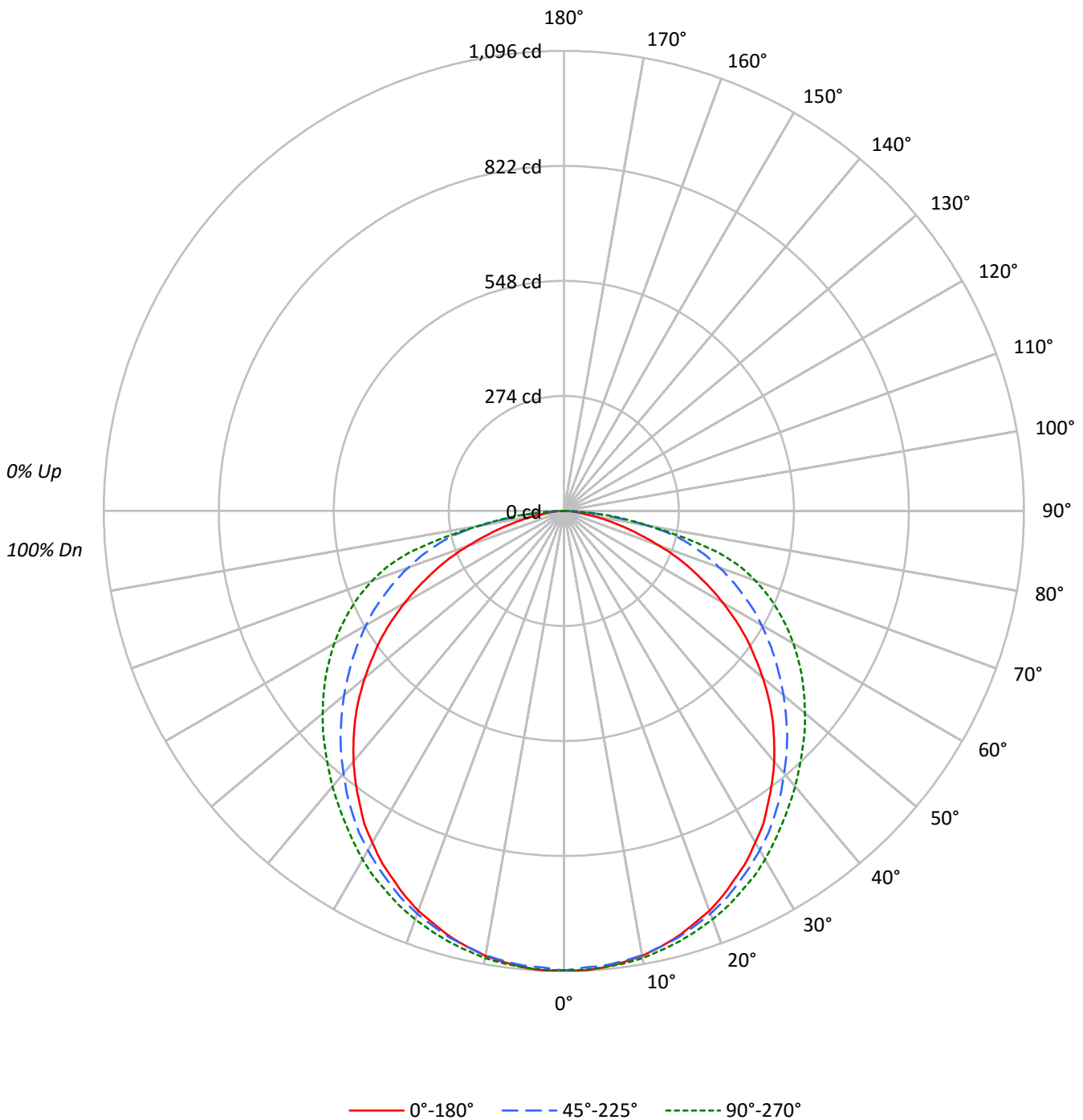
Input Watts (W): 38.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1473	1473	1473
5°	1474	1469	1474
10°	1470	1468	1478
15°	1461	1465	1479
20°	1452	1462	1482
25°	1434	1455	1484
30°	1417	1450	1490
35°	1394	1443	1491
40°	1369	1434	1505
45°	1338	1432	1529
50°	1295	1431	1569
55°	1249	1441	1626
60°	1178	1463	1699
65°	1088	1497	1794
70°	950	1550	1911
75°	771	1630	1975
80°	569	1598	1598
85°	435	1178	1329



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.7	3.1
10°-20°	297.7	8.8
20°-30°	453.2	13.4
30°-40°	550.3	16.3
40°-50°	581.4	17.2
50°-60°	548.6	16.3
60°-70°	456.1	13.5
70°-80°	300.1	8.9
80°-90°	81.8	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°	854.6	25.3
0°-40°	1404.9	41.7
0°-60°	2535.0	75.2
0°-90°	3373.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3373.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1094	1094	1094	1094	1094	
5°	1092	1092	1087	1092	1092	104
15°	1049	1051	1052	1062	1062	296
25°	966	972	980	997	1000	446
35°	849	859	878	901	908	531
45°	703	717	753	789	804	542
55°	532	555	614	672	693	474
65°	342	381	470	539	563	338
75°	148	216	314	371	380	160
85°	28	62	76	85	86	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1094.4	1094.4	1094.4	1094.4	1094.4
2.5°	1095.8	1094.4	1088.7	1094.4	1094.4
5°	1091.5	1091.5	1087.3	1091.5	1091.5
7.5°	1084.5	1084.5	1081.7	1087.3	1087.3
10°	1076.0	1076.0	1074.6	1081.7	1081.7
12.5°	1063.3	1064.7	1063.3	1071.8	1071.8
15°	1049.2	1050.6	1052.0	1061.9	1061.9
17.5°	1030.8	1033.7	1036.5	1047.8	1049.2
20°	1013.9	1015.3	1020.9	1033.7	1035.1
22.5°	991.3	995.5	1002.6	1015.3	1019.5
25°	965.9	971.5	980.0	996.9	999.8
27.5°	941.9	946.1	957.4	975.8	981.4
30°	912.2	919.3	933.4	951.8	958.8
32.5°	884.0	891.0	908.0	927.7	933.4
35°	848.7	858.6	878.3	900.9	908.0
37.5°	814.8	824.7	848.7	874.1	882.6
40°	779.5	790.8	816.2	845.8	857.1
42.5°	741.3	756.9	785.1	817.6	830.3
45°	703.2	717.3	752.6	789.4	803.5
47.5°	662.3	679.2	717.3	761.1	778.1
50°	618.5	639.7	683.5	731.5	749.8
52.5°	574.7	598.7	648.2	701.8	721.6
55°	532.4	555.0	614.3	672.2	693.3
57.5°	485.8	514.0	579.0	641.1	662.3
60°	437.7	468.8	543.7	608.6	631.2
62.5°	389.7	425.0	509.8	574.7	598.7
65°	341.7	381.3	470.2	539.4	563.4
67.5°	295.1	338.9	433.5	502.7	526.7
70°	241.5	296.5	394.0	461.8	485.8
72.5°	192.0	255.6	355.8	419.4	440.6
75°	148.3	216.1	313.5	371.4	379.9
77.5°	108.7	176.5	269.7	289.5	290.9
80°	73.4	141.2	206.2	203.3	206.2
82.5°	48.0	105.9	129.9	145.4	146.9
85°	28.2	62.1	76.3	84.7	86.1
87.5°	14.1	21.2	26.8	28.2	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)