

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: P310857

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CA08-W2A-U-5700K**

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: P310857
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-L82765-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5700K 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: 4791.0 lumens
Efficiency: N/A
Efficacy: 121.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

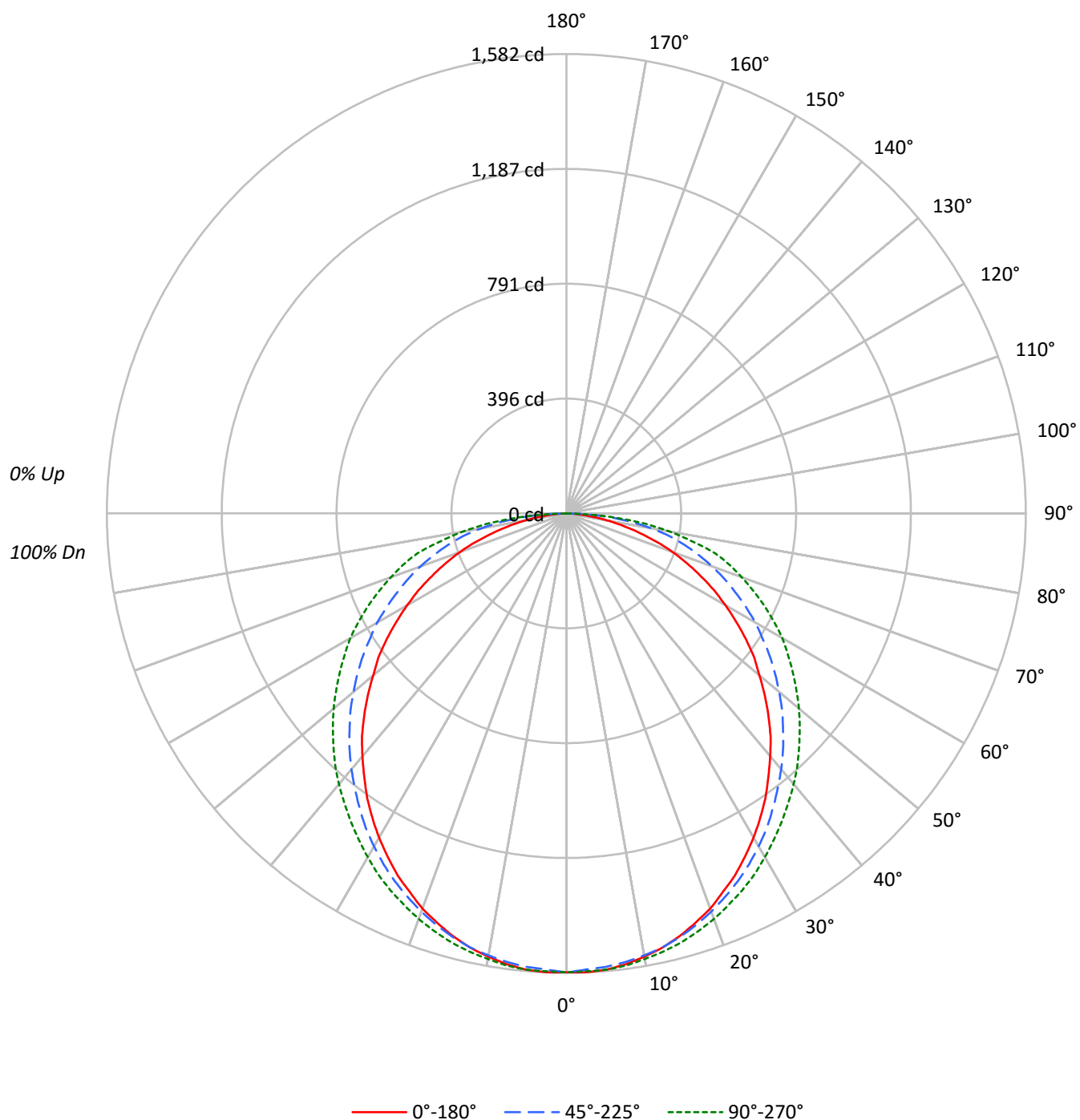
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2126	2126	2126
5°	2130	2117	2130
10°	2117	2111	2128
15°	2099	2103	2130
20°	2073	2089	2128
25°	2041	2074	2126
30°	2003	2057	2124
35°	1963	2037	2125
40°	1918	2021	2139
45°	1872	2008	2157
50°	1817	2003	2189
55°	1771	2006	2234
60°	1702	2023	2310
65°	1625	2045	2394
70°	1538	2107	2526
75°	1372	2198	2760
80°	1170	2328	2820
85°	834	2306	2700



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.5	3.1
10°-20°	427.6	8.9
20°-30°	645.8	13.5
30°-40°	778.3	16.2
40°-50°	817.1	17.1
50°-60°	764.4	16.0
60°-70°	631.3	13.2
70°-80°	430.2	9.0
80°-90°	146.7	3.1
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°	1222.9	25.5
0°-40°	2001.2	41.8
0°-60°	3582.8	74.8
0°-90°	4791.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4791.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1580	1580	1580	1580	1580	
5°	1577	1575	1567	1577	1577	150
15°	1507	1508	1510	1526	1529	425
25°	1375	1381	1397	1424	1432	633
35°	1195	1208	1240	1281	1294	747
45°	984	1005	1056	1113	1133	759
55°	755	785	855	925	952	674
65°	510	553	642	723	752	506
75°	264	324	423	502	531	281
85°	54	106	149	168	175	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1580.0	1580.0	1580.0	1580.0	1580.0
2.5°	1581.6	1580.0	1572.1	1580.0	1578.4
5°	1576.9	1575.3	1567.3	1576.9	1576.9
7.5°	1565.7	1565.7	1557.8	1568.9	1570.5
10°	1549.8	1549.8	1545.1	1557.8	1557.8
12.5°	1530.8	1530.8	1530.8	1543.5	1545.1
15°	1506.9	1508.5	1510.1	1526.0	1529.2
17.5°	1478.3	1481.5	1486.2	1505.3	1508.5
20°	1448.1	1451.3	1459.2	1481.5	1486.2
22.5°	1409.9	1417.9	1429.0	1454.5	1459.2
25°	1375.0	1381.3	1397.2	1424.3	1432.2
27.5°	1332.1	1341.6	1362.3	1390.9	1402.0
30°	1289.1	1298.7	1324.1	1357.5	1367.0
32.5°	1243.0	1257.3	1284.4	1319.3	1330.5
35°	1195.4	1208.1	1239.9	1281.2	1293.9
37.5°	1142.9	1160.4	1195.4	1239.9	1255.8
40°	1092.0	1111.1	1150.8	1198.5	1217.6
42.5°	1041.2	1060.2	1104.7	1158.8	1177.9
45°	983.9	1004.6	1055.5	1112.7	1133.4
47.5°	926.7	952.2	1007.8	1068.2	1090.4
50°	867.9	896.5	956.9	1020.5	1045.9
52.5°	815.4	842.5	906.1	974.4	998.2
55°	755.0	785.2	855.2	925.1	952.2
57.5°	693.1	726.4	801.1	877.4	904.5
60°	632.6	669.2	751.9	828.2	858.4
62.5°	573.8	610.4	696.2	775.7	805.9
65°	510.3	553.2	642.2	723.3	751.9
67.5°	449.8	495.9	589.7	669.2	697.8
70°	391.0	435.5	535.7	613.6	642.2
72.5°	327.5	378.3	478.5	559.5	589.7
75°	263.9	324.3	422.8	502.3	530.9
77.5°	205.1	267.0	365.6	430.8	445.1
80°	151.0	214.6	300.4	346.5	364.0
82.5°	97.0	160.5	228.9	262.3	276.6
85°	54.0	106.5	149.4	168.5	174.9
87.5°	22.3	46.1	60.4	68.4	68.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)