

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: P314370

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-CA125-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: P314370
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 4546.0 lumens
Efficiency: N/A
Efficacy: 118.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

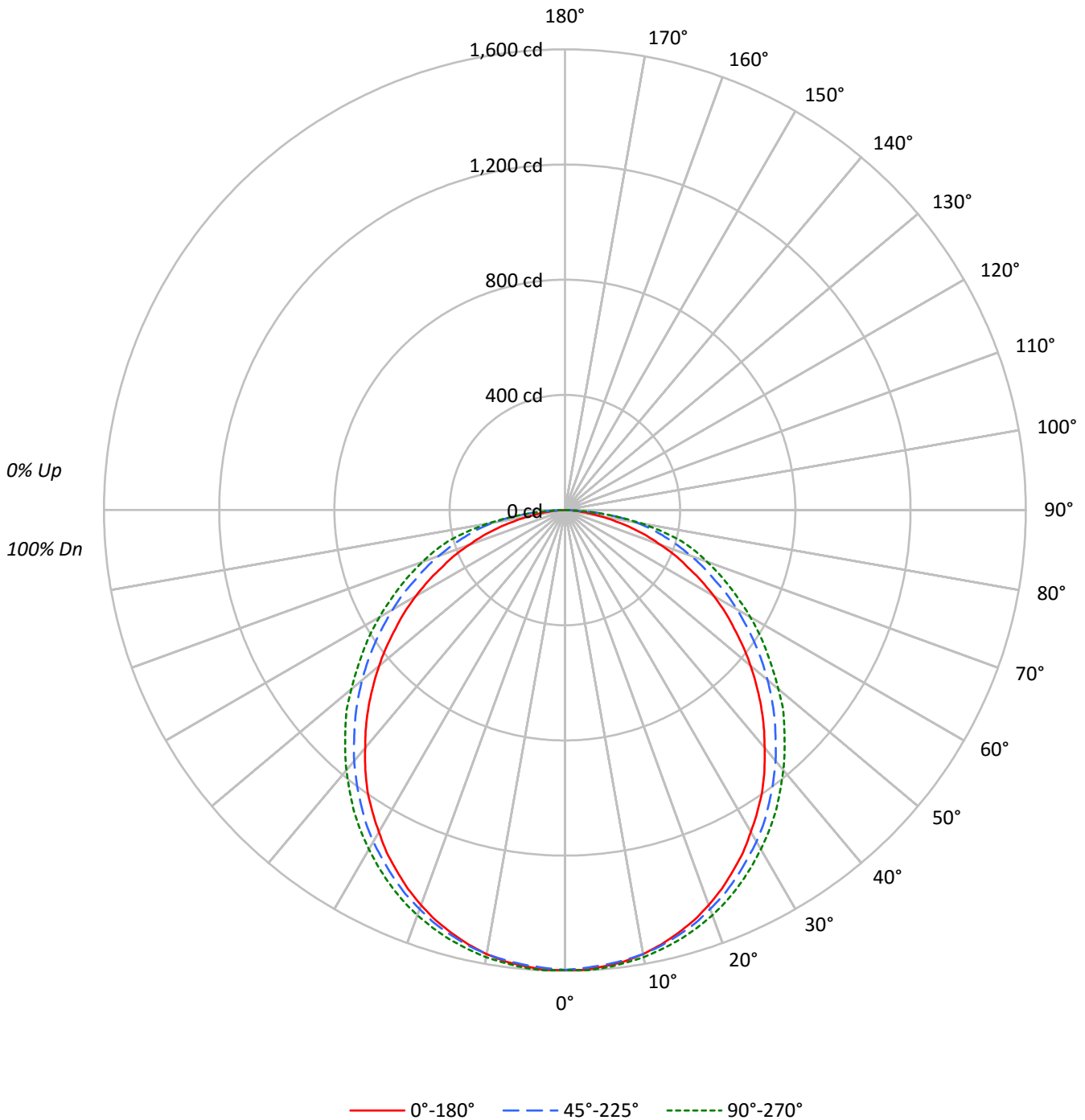
Input Watts (W): 38.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2149	2149	2149
5°	2147	2141	2155
10°	2139	2139	2154
15°	2118	2128	2150
20°	2090	2111	2144
25°	2052	2090	2131
30°	2006	2066	2113
35°	1962	2033	2097
40°	1895	1999	2072
45°	1833	1959	2050
50°	1762	1922	2025
55°	1684	1887	2005
60°	1605	1857	2001
65°	1503	1825	2014
70°	1392	1835	2068
75°	1246	1869	2184
80°	1007	1980	2137
85°	758	1738	1694



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.2	3.3
10°-20°	432.0	9.5
20°-30°	649.4	14.3
30°-40°	773.6	17.0
40°-50°	791.7	17.4
50°-60°	712.8	15.7
60°-70°	559.8	12.3
70°-80°	363.3	8.0
80°-90°	112.4	2.5
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°	1232.6	27.1
0°-40°	2006.2	44.1
0°-60°	3510.6	77.2
0°-90°	4546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4546.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1597	1597	1597	1597	1597	
5°	1590	1593	1586	1594	1596	151
15°	1520	1525	1528	1541	1544	429
25°	1382	1393	1408	1431	1435	637
35°	1194	1209	1238	1268	1276	745
45°	963	986	1030	1068	1077	743
55°	718	749	804	846	855	643
65°	472	508	573	621	632	470
75°	240	286	360	409	420	254
85°	49	91	113	110	110	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1597.0	1597.0	1597.0	1597.0	1597.0
2.5°	1598.5	1598.5	1591.3	1598.5	1599.9
5°	1589.8	1592.7	1585.5	1594.2	1595.6
7.5°	1581.2	1581.2	1576.8	1585.5	1586.9
10°	1565.3	1566.7	1565.3	1575.4	1576.8
12.5°	1545.1	1547.9	1549.4	1559.5	1560.9
15°	1520.5	1524.8	1527.7	1540.7	1543.6
17.5°	1493.1	1497.4	1504.6	1519.1	1522.0
20°	1459.9	1465.6	1474.3	1493.1	1497.4
22.5°	1423.8	1429.5	1444.0	1461.3	1468.5
25°	1381.9	1393.4	1407.9	1431.0	1435.3
27.5°	1340.0	1350.1	1368.9	1393.4	1399.2
30°	1290.9	1306.8	1329.9	1354.5	1360.2
32.5°	1243.3	1259.1	1286.6	1312.6	1319.8
35°	1194.2	1208.6	1237.5	1267.8	1276.5
37.5°	1137.9	1156.6	1188.4	1218.7	1227.4
40°	1078.7	1101.8	1137.9	1169.6	1179.7
42.5°	1022.3	1046.9	1083.0	1117.6	1129.2
45°	963.1	986.2	1029.6	1068.5	1077.2
47.5°	902.5	928.5	974.7	1013.7	1028.1
50°	841.8	869.3	918.4	958.8	967.5
52.5°	781.2	810.1	862.1	905.4	909.7
55°	717.7	749.4	804.3	846.2	854.8
57.5°	659.9	687.3	746.5	789.9	800.0
60°	596.4	626.7	690.2	730.7	743.6
62.5°	535.7	567.5	633.9	674.3	685.9
65°	472.2	508.3	573.3	620.9	632.5
67.5°	417.3	452.0	521.3	567.5	579.0
70°	353.8	392.8	466.4	514.1	525.6
72.5°	298.9	339.3	413.0	459.2	476.5
75°	239.7	285.9	359.6	408.6	420.2
77.5°	181.9	235.4	310.5	348.0	348.0
80°	130.0	186.3	255.6	272.9	275.8
82.5°	85.2	140.1	189.2	187.7	187.7
85°	49.1	91.0	112.6	109.7	109.7
87.5°	18.8	37.5	40.4	40.4	39.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)