

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: P314436

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CP250-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: P314436
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: 24FCZ2-55HE-UNV-L83050-S-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 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: 4948.0 lumens
Efficiency: N/A
Efficacy: 114.8 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

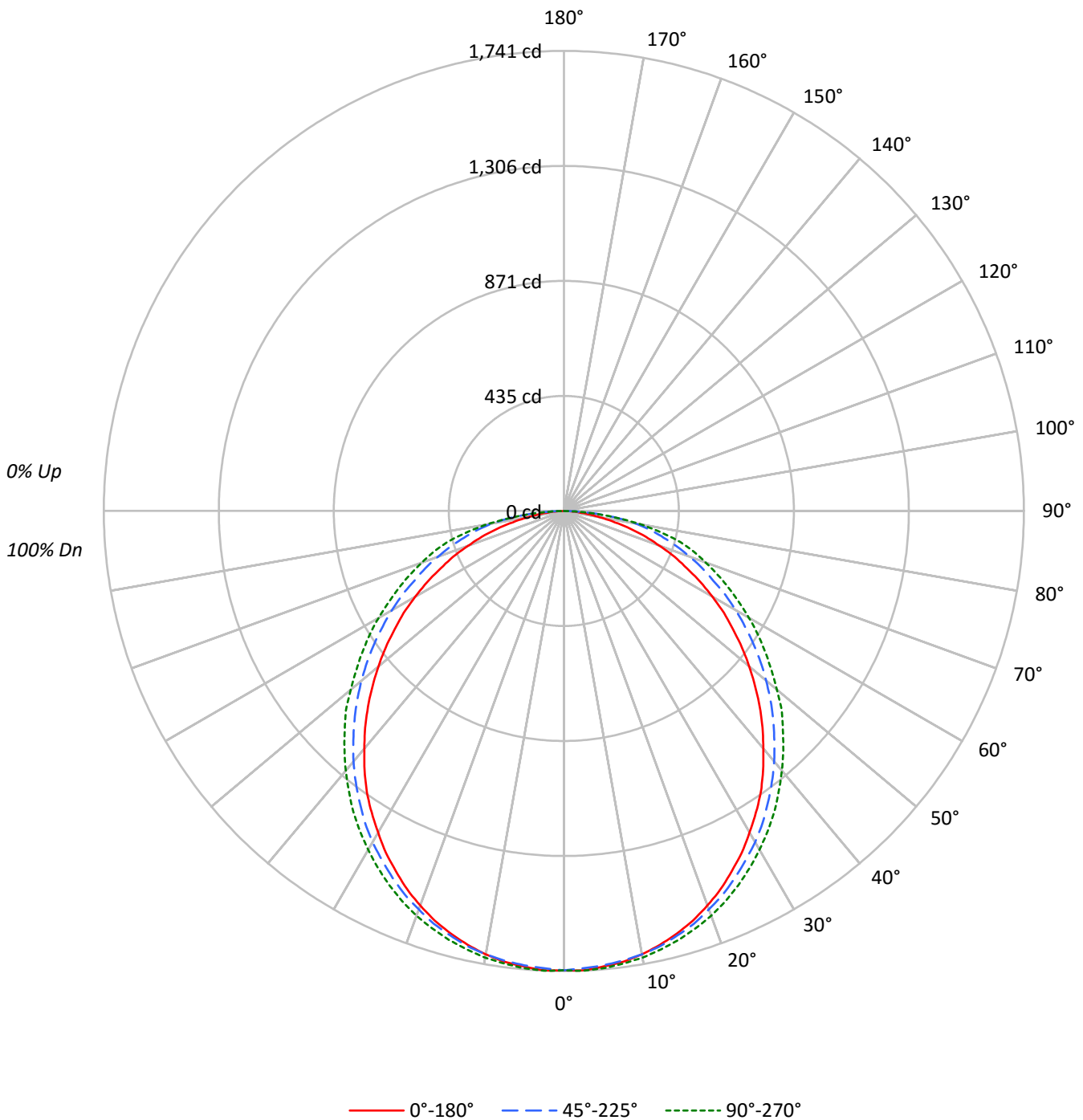
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2339	2339	2339
5°	2337	2331	2346
10°	2328	2328	2345
15°	2305	2316	2340
20°	2275	2298	2334
25°	2233	2275	2319
30°	2183	2249	2300
35°	2135	2212	2282
40°	2062	2175	2255
45°	1995	2132	2231
50°	1918	2092	2204
55°	1832	2054	2183
60°	1747	2022	2178
65°	1636	1987	2192
70°	1515	1997	2251
75°	1356	2034	2378
80°	1096	2156	2326
85°	824	1893	1843



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.6	3.3
10°-20°	470.2	9.5
20°-30°	706.8	14.3
30°-40°	842.0	17.0
40°-50°	861.7	17.4
50°-60°	775.8	15.7
60°-70°	609.2	12.3
70°-80°	395.4	8.0
80°-90°	122.3	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°	1341.6	27.1
0°-40°	2183.6	44.1
0°-60°	3821.1	77.2
0°-90°	4948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4948.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1738	1738	1738	1738	1738	
5°	1730	1734	1726	1735	1737	164
15°	1655	1660	1663	1677	1680	467
25°	1504	1517	1532	1558	1562	693
35°	1300	1316	1347	1380	1389	811
45°	1048	1073	1121	1163	1172	808
55°	781	816	875	921	930	700
65°	514	553	624	676	688	512
75°	261	311	391	445	457	276
85°	53	99	123	119	119	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1738.3	1738.3	1738.3	1738.3	1738.3
2.5°	1739.8	1739.8	1732.0	1739.8	1741.4
5°	1730.4	1733.5	1725.7	1735.1	1736.7
7.5°	1721.0	1721.0	1716.3	1725.7	1727.3
10°	1703.7	1705.3	1703.7	1714.7	1716.3
12.5°	1681.7	1684.8	1686.4	1697.4	1699.0
15°	1655.0	1659.7	1662.8	1677.0	1680.1
17.5°	1625.1	1629.8	1637.7	1653.4	1656.5
20°	1589.0	1595.2	1604.7	1625.1	1629.8
22.5°	1549.7	1556.0	1571.7	1590.5	1598.4
25°	1504.1	1516.7	1532.4	1557.5	1562.2
27.5°	1458.5	1469.5	1489.9	1516.7	1522.9
30°	1405.1	1422.4	1447.5	1474.2	1480.5
32.5°	1353.2	1370.5	1400.4	1428.6	1436.5
35°	1299.8	1315.5	1346.9	1379.9	1389.4
37.5°	1238.5	1258.9	1293.5	1326.5	1335.9
40°	1174.0	1199.2	1238.5	1273.1	1284.1
42.5°	1112.7	1139.5	1178.8	1216.5	1229.0
45°	1048.3	1073.4	1120.6	1163.0	1172.5
47.5°	982.3	1010.6	1060.9	1103.3	1119.0
50°	916.3	946.1	999.6	1043.6	1053.0
52.5°	850.3	881.7	938.3	985.4	990.2
55°	781.1	815.7	875.4	921.0	930.4
57.5°	718.3	748.1	812.6	859.7	870.7
60°	649.1	682.1	751.3	795.3	809.4
62.5°	583.1	617.7	690.0	734.0	746.5
65°	513.9	553.2	624.0	675.8	688.4
67.5°	454.2	491.9	567.4	617.7	630.2
70°	385.1	427.5	507.6	559.5	572.1
72.5°	325.3	369.3	449.5	499.8	518.7
75°	260.9	311.2	391.3	444.8	457.4
77.5°	198.0	256.2	337.9	378.8	378.8
80°	141.5	202.7	278.2	297.0	300.2
82.5°	92.7	152.5	205.9	204.3	204.3
85°	53.4	99.0	122.6	119.4	119.4
87.5°	20.4	40.9	44.0	44.0	42.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)