

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: P313971

Luminaire Tested: **24FCZ2-45-UNV-L83050-CA125-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: P313971
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: 24FCZ2-45-UNV-L83050-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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

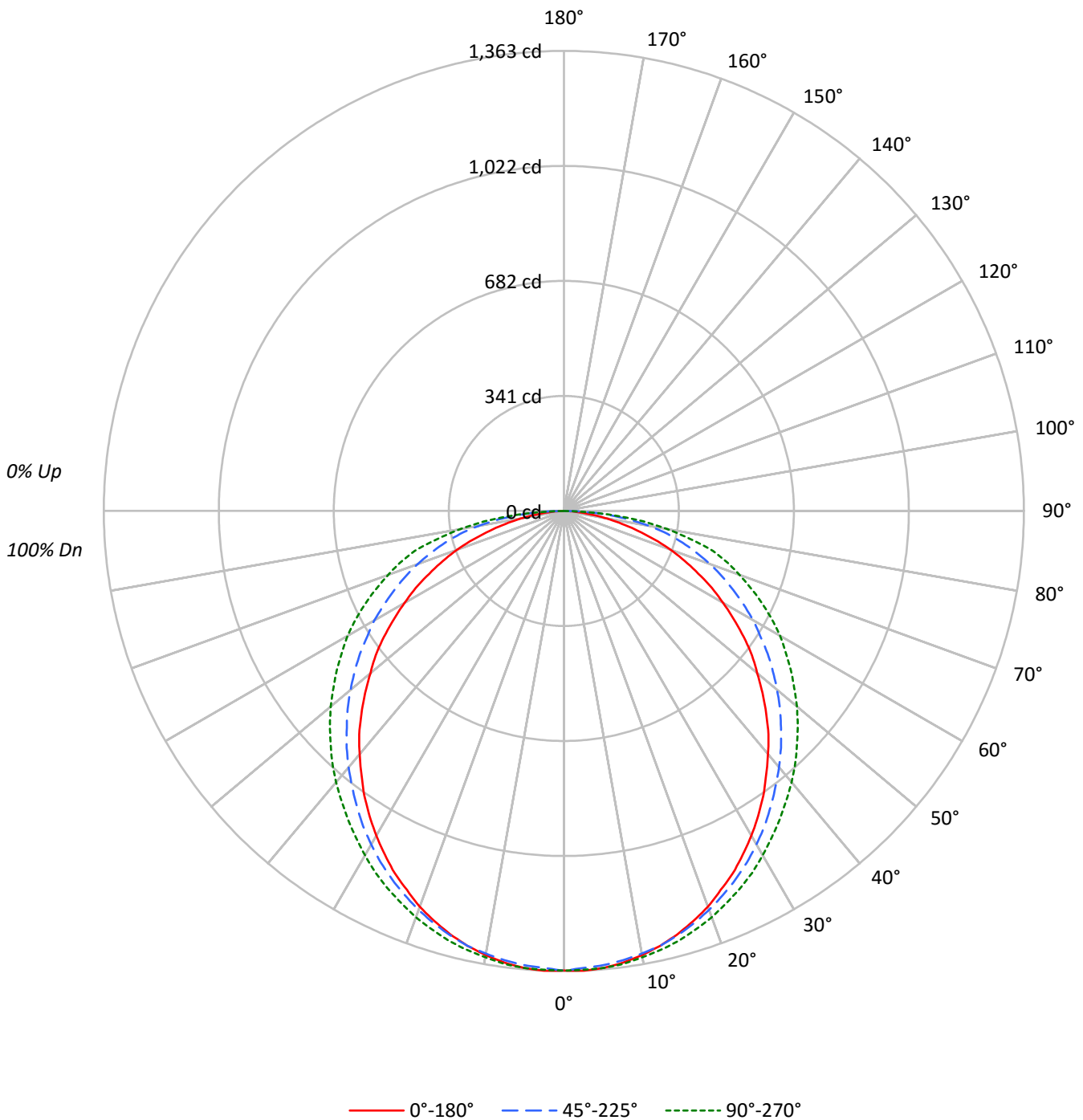
Lumens per Lamp: N/A
Luminaire Lumens: 4129.0 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 37.6
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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1832	1832	1832
5°	1836	1824	1836
10°	1825	1819	1834
15°	1809	1813	1836
20°	1787	1801	1834
25°	1759	1788	1832
30°	1726	1773	1830
35°	1692	1755	1832
40°	1653	1742	1843
45°	1614	1731	1859
50°	1566	1726	1887
55°	1526	1729	1925
60°	1467	1744	1991
65°	1400	1762	2063
70°	1326	1816	2177
75°	1182	1894	2379
80°	1008	2006	2431
85°	719	1988	2326



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	3.1
10°-20°	368.5	8.9
20°-30°	556.6	13.5
30°-40°	670.8	16.2
40°-50°	704.2	17.1
50°-60°	658.8	16.0
60°-70°	544.1	13.2
70°-80°	370.7	9.0
80°-90°	126.4	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°	1053.9	25.5
0°-40°	1724.7	41.8
0°-60°	3087.7	74.8
0°-90°	4129.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4129.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1362	1362	1362	1362	1362	
5°	1359	1358	1351	1359	1359	129
15°	1299	1300	1301	1315	1318	366
25°	1185	1190	1204	1228	1234	545
35°	1030	1041	1068	1104	1115	644
45°	848	866	910	959	977	654
55°	651	677	737	797	821	581
65°	440	477	554	623	648	436
75°	227	280	364	433	458	242
85°	47	92	129	145	151	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1361.7	1361.7	1361.7	1361.7	1361.7
2.5°	1363.1	1361.7	1354.9	1361.7	1360.3
5°	1359.0	1357.6	1350.7	1359.0	1359.0
7.5°	1349.4	1349.4	1342.5	1352.1	1353.5
10°	1335.7	1335.7	1331.6	1342.5	1342.5
12.5°	1319.2	1319.2	1319.2	1330.2	1331.6
15°	1298.7	1300.1	1301.4	1315.1	1317.9
17.5°	1274.0	1276.8	1280.9	1297.3	1300.1
20°	1248.0	1250.7	1257.6	1276.8	1280.9
22.5°	1215.1	1222.0	1231.6	1253.5	1257.6
25°	1185.0	1190.5	1204.2	1227.5	1234.3
27.5°	1148.0	1156.2	1174.0	1198.7	1208.3
30°	1111.0	1119.2	1141.1	1169.9	1178.1
32.5°	1071.3	1083.6	1106.9	1137.0	1146.6
35°	1030.2	1041.1	1068.5	1104.2	1115.1
37.5°	985.0	1000.0	1030.2	1068.5	1082.2
40°	941.1	957.6	991.8	1032.9	1049.4
42.5°	897.3	913.7	952.1	998.7	1015.1
45°	848.0	865.8	909.6	958.9	976.8
47.5°	798.7	820.6	868.5	920.6	939.8
50°	748.0	772.6	824.7	879.5	901.4
52.5°	702.8	726.1	780.9	839.8	860.3
55°	650.7	676.7	737.0	797.3	820.6
57.5°	597.3	626.1	690.4	756.2	779.5
60°	545.2	576.7	648.0	713.7	739.8
62.5°	494.5	526.1	600.0	668.5	694.6
65°	439.7	476.7	553.5	623.3	648.0
67.5°	387.7	427.4	508.2	576.7	601.4
70°	337.0	375.4	461.7	528.8	553.5
72.5°	282.2	326.0	412.3	482.2	508.2
75°	227.4	279.5	364.4	432.9	457.6
77.5°	176.7	230.1	315.1	371.3	383.6
80°	130.1	184.9	258.9	298.6	313.7
82.5°	83.6	138.4	197.3	226.0	238.4
85°	46.6	91.8	128.8	145.2	150.7
87.5°	19.2	39.7	52.1	58.9	58.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)