

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: P310822

Luminaire Tested: **24FCZ2-45-UNV-L82765-CA125-W2A-U-6500K**

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: P310822
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-L82765-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 6500K 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: 4315.0 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

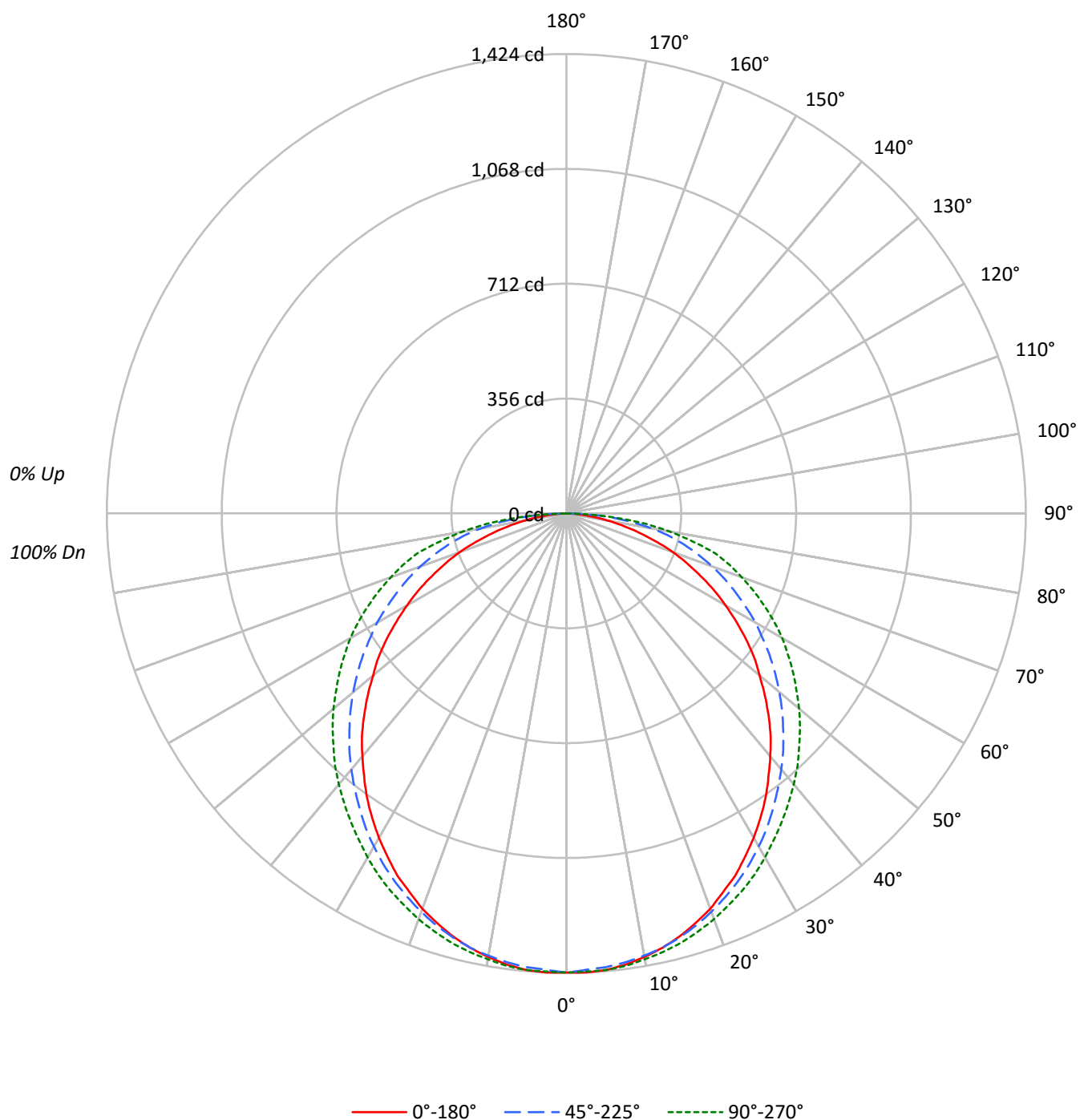
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1915	1915	1915
5°	1918	1907	1918
10°	1907	1901	1917
15°	1891	1895	1918
20°	1867	1882	1917
25°	1839	1868	1915
30°	1804	1853	1913
35°	1768	1834	1914
40°	1727	1821	1926
45°	1686	1809	1942
50°	1636	1804	1972
55°	1595	1807	2012
60°	1533	1822	2080
65°	1463	1841	2156
70°	1386	1898	2275
75°	1236	1980	2486
80°	1054	2097	2540
85°	752	2078	2431



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.7	3.1
10°-20°	385.1	8.9
20°-30°	581.6	13.5
30°-40°	701.0	16.2
40°-50°	735.9	17.1
50°-60°	688.5	16.0
60°-70°	568.6	13.2
70°-80°	387.4	9.0
80°-90°	132.1	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°	1101.4	25.5
0°-40°	1802.4	41.8
0°-60°	3226.8	74.8
0°-90°	4315.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4315.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1423	1423	1423	1423	1423	
5°	1420	1419	1412	1420	1420	135
15°	1357	1359	1360	1374	1377	383
25°	1238	1244	1258	1283	1290	570
35°	1077	1088	1117	1154	1165	673
45°	886	905	951	1002	1021	683
55°	680	707	770	833	858	607
65°	460	498	578	651	677	456
75°	238	292	381	452	478	253
85°	49	96	135	152	158	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1423.0	1423.0	1423.0	1423.0	1423.0
2.5°	1424.5	1423.0	1415.9	1423.0	1421.6
5°	1420.2	1418.8	1411.6	1420.2	1420.2
7.5°	1410.2	1410.2	1403.0	1413.0	1414.5
10°	1395.8	1395.8	1391.6	1403.0	1403.0
12.5°	1378.7	1378.7	1378.7	1390.1	1391.6
15°	1357.2	1358.6	1360.1	1374.4	1377.2
17.5°	1331.4	1334.3	1338.6	1355.8	1358.6
20°	1304.2	1307.1	1314.2	1334.3	1338.6
22.5°	1269.9	1277.0	1287.0	1309.9	1314.2
25°	1238.4	1244.1	1258.4	1282.7	1289.9
27.5°	1199.7	1208.3	1226.9	1252.7	1262.7
30°	1161.1	1169.6	1192.6	1222.6	1231.2
32.5°	1119.5	1132.4	1156.8	1188.3	1198.3
35°	1076.6	1088.0	1116.7	1153.9	1165.4
37.5°	1029.3	1045.1	1076.6	1116.7	1131.0
40°	983.5	1000.7	1036.5	1079.5	1096.6
42.5°	937.7	954.9	995.0	1043.7	1060.8
45°	886.2	904.8	950.6	1002.1	1020.8
47.5°	834.6	857.6	907.7	962.1	982.1
50°	781.7	807.4	861.8	919.1	942.0
52.5°	734.4	758.8	816.0	877.6	899.1
55°	680.0	707.2	770.2	833.2	857.6
57.5°	624.2	654.3	721.5	790.3	814.6
60°	569.8	602.7	677.2	745.9	773.1
62.5°	516.8	549.7	627.1	698.6	725.8
65°	459.6	498.2	578.4	651.4	677.2
67.5°	405.2	446.7	531.1	602.7	628.5
70°	352.2	392.3	482.5	552.6	578.4
72.5°	294.9	340.7	430.9	503.9	531.1
75°	237.7	292.1	380.8	452.4	478.2
77.5°	184.7	240.5	329.3	388.0	400.9
80°	136.0	193.3	270.6	312.1	327.8
82.5°	87.3	144.6	206.2	236.2	249.1
85°	48.7	95.9	134.6	151.8	157.5
87.5°	20.0	41.5	54.4	61.6	61.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)