

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: P311506

Luminaire Tested: **24FCZ2-45-UNV-L82765-S-CP125-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: P311506
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: 24FCZ2-45-UNV-L82765-S-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 4446.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

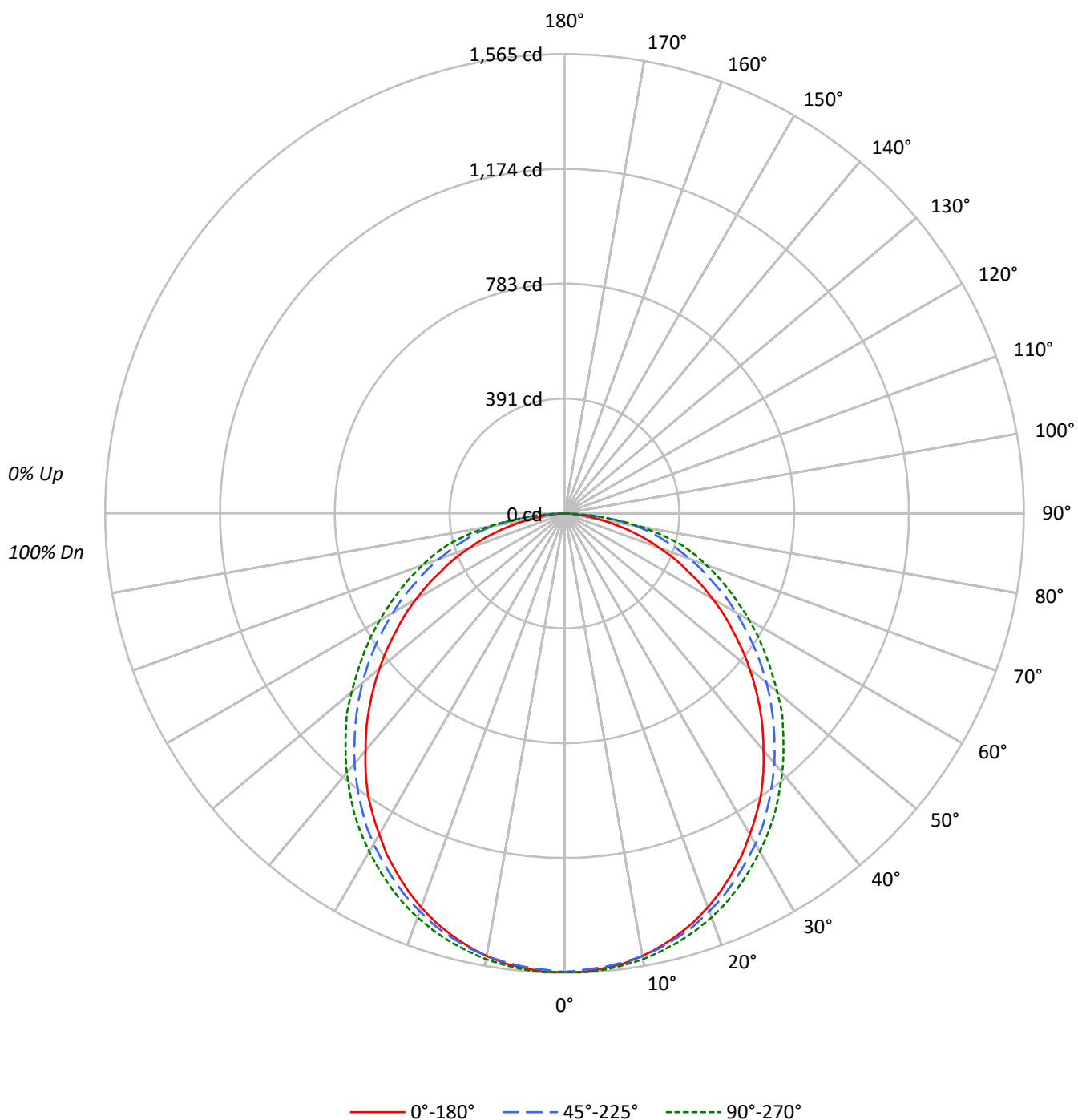
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2102	2102	2102
5°	2100	2094	2108
10°	2091	2091	2107
15°	2071	2081	2103
20°	2044	2065	2097
25°	2006	2044	2084
30°	1961	2021	2067
35°	1918	1988	2051
40°	1853	1955	2027
45°	1792	1916	2005
50°	1723	1880	1981
55°	1647	1845	1961
60°	1569	1816	1957
65°	1470	1785	1969
70°	1361	1794	2022
75°	1219	1828	2137
80°	985	1937	2090
85°	741	1701	1656



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.9	3.3
10°-20°	422.5	9.5
20°-30°	635.1	14.3
30°-40°	756.5	17.0
40°-50°	774.3	17.4
50°-60°	697.1	15.7
60°-70°	547.4	12.3
70°-80°	355.3	8.0
80°-90°	109.9	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°	1205.5	27.1
0°-40°	1962.0	44.1
0°-60°	3433.4	77.2
0°-90°	4446.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4446.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1562	1562	1562	1562	1562	
5°	1555	1558	1551	1559	1560	148
15°	1487	1491	1494	1507	1510	419
25°	1352	1363	1377	1400	1404	623
35°	1168	1182	1210	1240	1248	729
45°	942	964	1007	1045	1054	726
55°	702	733	787	828	836	629
65°	462	497	561	607	618	460
75°	234	280	352	400	411	248
85°	48	89	110	107	107	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1561.9	1561.9	1561.9	1561.9	1561.9
2.5°	1563.3	1563.3	1556.3	1563.3	1564.7
5°	1554.8	1557.7	1550.6	1559.1	1560.5
7.5°	1546.4	1546.4	1542.1	1550.6	1552.0
10°	1530.8	1532.3	1530.8	1540.7	1542.1
12.5°	1511.1	1513.9	1515.3	1525.2	1526.6
15°	1487.1	1491.3	1494.1	1506.8	1509.7
17.5°	1460.2	1464.5	1471.5	1485.6	1488.5
20°	1427.7	1433.4	1441.9	1460.2	1464.5
22.5°	1392.4	1398.1	1412.2	1429.2	1436.2
25°	1351.5	1362.8	1376.9	1399.5	1403.7
27.5°	1310.5	1320.4	1338.8	1362.8	1368.4
30°	1262.5	1278.1	1300.6	1324.7	1330.3
32.5°	1215.9	1231.5	1258.3	1283.7	1290.8
35°	1167.9	1182.0	1210.3	1239.9	1248.4
37.5°	1112.8	1131.2	1162.3	1191.9	1200.4
40°	1054.9	1077.5	1112.8	1143.9	1153.8
42.5°	999.8	1023.9	1059.2	1093.1	1104.4
45°	941.9	964.5	1006.9	1045.0	1053.5
47.5°	882.6	908.1	953.2	991.4	1005.5
50°	823.3	850.2	898.2	937.7	946.2
52.5°	764.0	792.3	843.1	885.5	889.7
55°	701.9	732.9	786.6	827.6	836.0
57.5°	645.4	672.2	730.1	772.5	782.4
60°	583.2	612.9	675.0	714.6	727.3
62.5°	523.9	555.0	620.0	659.5	670.8
65°	461.8	497.1	560.6	607.3	618.5
67.5°	408.1	442.0	509.8	555.0	566.3
70°	346.0	384.1	456.1	502.7	514.0
72.5°	292.3	331.9	403.9	449.1	466.0
75°	234.4	279.6	351.6	399.7	411.0
77.5°	177.9	230.2	303.6	340.3	340.3
80°	127.1	182.2	250.0	266.9	269.7
82.5°	83.3	137.0	185.0	183.6	183.6
85°	48.0	89.0	110.2	107.3	107.3
87.5°	18.4	36.7	39.5	39.5	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)