

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: P310891

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CP250-W2A-U-5000K**

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: P310891
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: 24FCZ2-50HE-UNV-L82765-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 5000K 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: 4391.0 lumens
Efficiency: N/A
Efficacy: 111.7 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

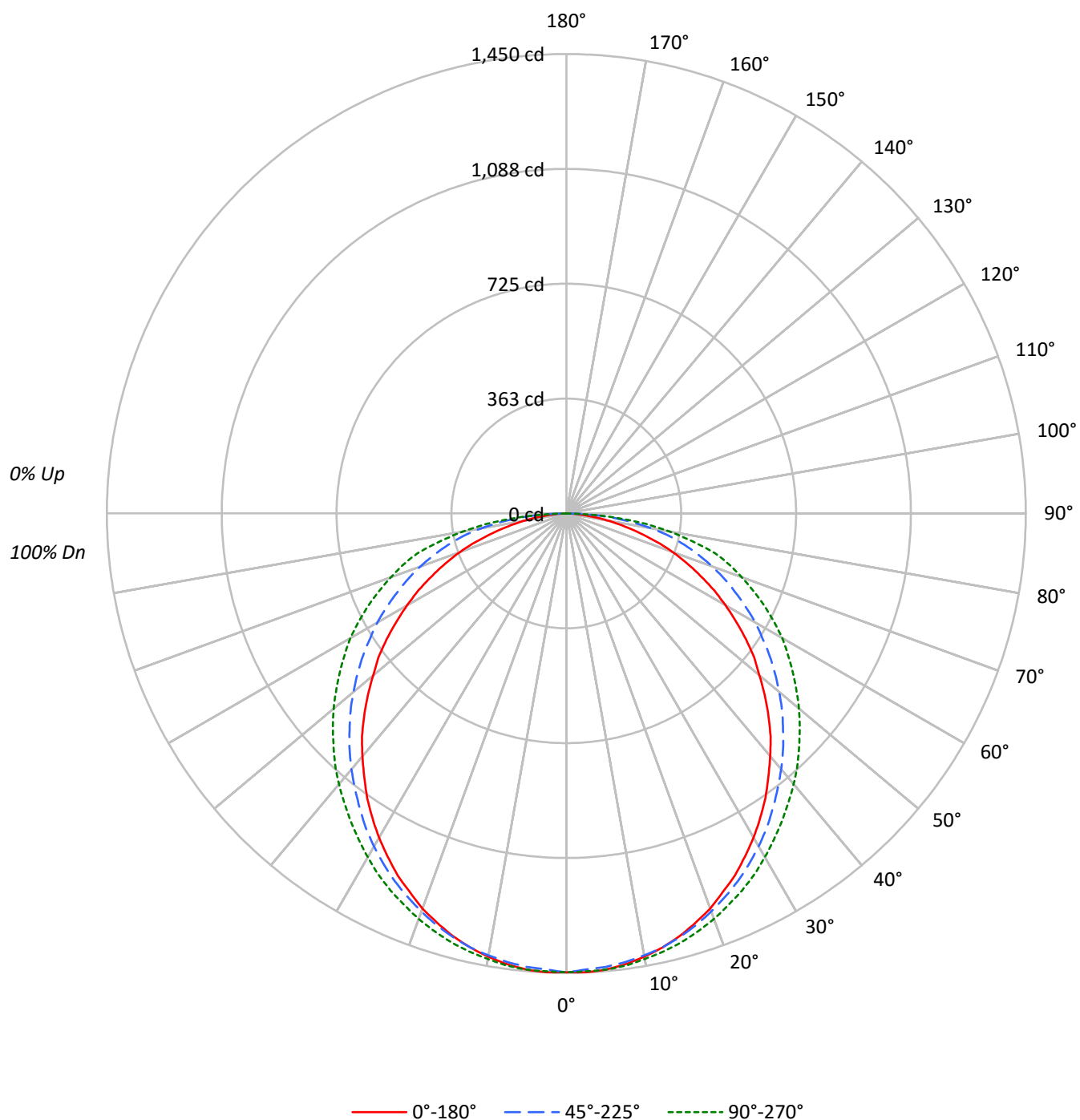
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1948	1948	1948
5°	1952	1940	1952
10°	1941	1935	1951
15°	1924	1928	1952
20°	1900	1915	1950
25°	1871	1901	1949
30°	1836	1885	1947
35°	1800	1866	1948
40°	1758	1853	1960
45°	1716	1841	1976
50°	1665	1836	2007
55°	1623	1839	2047
60°	1560	1854	2117
65°	1489	1874	2194
70°	1410	1932	2316
75°	1257	2014	2530
80°	1072	2133	2585
85°	764	2113	2475



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.0	3.1
10°-20°	391.9	8.9
20°-30°	591.9	13.5
30°-40°	713.4	16.2
40°-50°	748.9	17.1
50°-60°	700.6	16.0
60°-70°	578.6	13.2
70°-80°	394.3	9.0
80°-90°	134.5	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°	1120.8	25.5
0°-40°	1834.2	41.8
0°-60°	3283.7	74.8
0°-90°	4391.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4391.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1445	1444	1436	1445	1445	137
15°	1381	1383	1384	1399	1402	389
25°	1260	1266	1281	1305	1313	580
35°	1096	1107	1136	1174	1186	685
45°	902	921	967	1020	1039	695
55°	692	720	784	848	873	618
65°	468	507	589	663	689	464
75°	242	297	388	460	487	258
85°	50	98	137	154	160	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1448.1	1448.1	1448.1	1448.1	1448.1
2.5°	1449.6	1448.1	1440.8	1448.1	1446.7
5°	1445.2	1443.7	1436.5	1445.2	1445.2
7.5°	1435.0	1435.0	1427.7	1437.9	1439.4
10°	1420.4	1420.4	1416.1	1427.7	1427.7
12.5°	1403.0	1403.0	1403.0	1414.6	1416.1
15°	1381.1	1382.6	1384.0	1398.6	1401.5
17.5°	1354.9	1357.8	1362.2	1379.6	1382.6
20°	1327.2	1330.1	1337.4	1357.8	1362.2
22.5°	1292.2	1299.5	1309.7	1333.0	1337.4
25°	1260.2	1266.0	1280.6	1305.3	1312.6
27.5°	1220.8	1229.6	1248.5	1274.7	1284.9
30°	1181.5	1190.3	1213.6	1244.2	1252.9
32.5°	1139.3	1152.4	1177.1	1209.2	1219.4
35°	1095.6	1107.2	1136.3	1174.2	1185.9
37.5°	1047.5	1063.5	1095.6	1136.3	1150.9
40°	1000.9	1018.3	1054.8	1098.5	1116.0
42.5°	954.2	971.7	1012.5	1062.0	1079.5
45°	901.8	920.7	967.4	1019.8	1038.7
47.5°	849.3	872.7	923.6	979.0	999.4
50°	795.4	821.7	877.0	935.3	958.6
52.5°	747.4	772.1	830.4	893.1	914.9
55°	692.0	719.7	783.8	847.9	872.7
57.5°	635.2	665.8	734.3	804.2	829.0
60°	579.8	613.3	689.1	759.0	786.7
62.5°	525.9	559.4	638.1	710.9	738.6
65°	467.7	507.0	588.6	662.9	689.1
67.5°	412.3	454.5	540.5	613.3	639.6
70°	358.4	399.2	491.0	562.3	588.6
72.5°	300.1	346.7	438.5	512.8	540.5
75°	241.8	297.2	387.5	460.4	486.6
77.5°	187.9	244.8	335.1	394.8	407.9
80°	138.4	196.7	275.3	317.6	333.6
82.5°	88.9	147.1	209.8	240.4	253.5
85°	49.5	97.6	136.9	154.4	160.3
87.5°	20.4	42.2	55.4	62.6	62.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)