

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: P310872

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CP125-W2A-U-4500K**

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: P310872
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-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 4561.0 lumens
Efficiency: N/A
Efficacy: 116.6 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

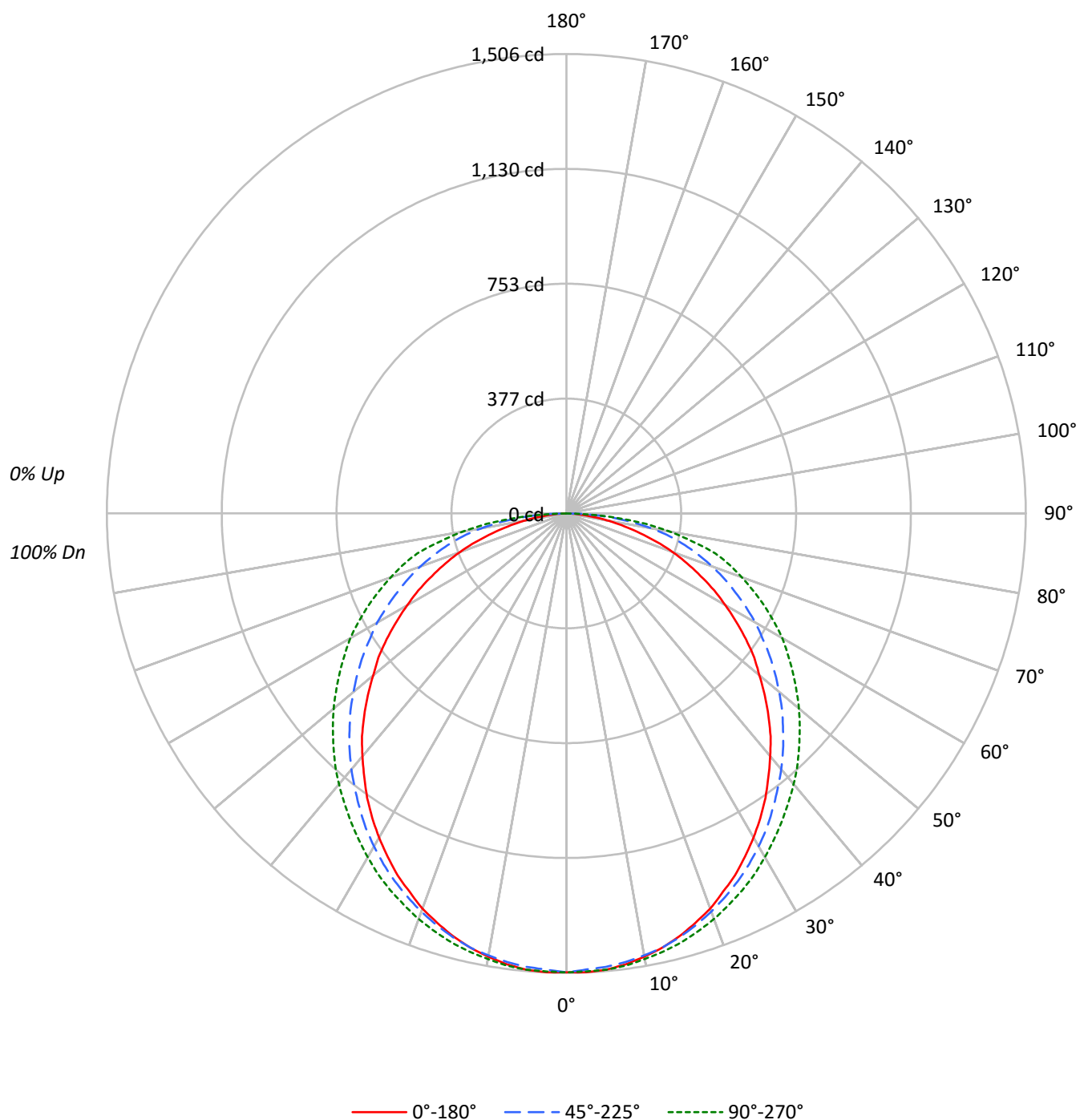
Input Watts (W): 39.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2024	2024	2024
5°	2028	2015	2028
10°	2016	2010	2026
15°	1998	2003	2028
20°	1974	1989	2026
25°	1943	1975	2024
30°	1907	1958	2022
35°	1869	1939	2023
40°	1826	1924	2036
45°	1782	1912	2053
50°	1729	1907	2084
55°	1686	1910	2126
60°	1621	1926	2199
65°	1547	1947	2279
70°	1465	2006	2405
75°	1306	2092	2627
80°	1114	2216	2685
85°	795	2195	2570



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.4	3.1
10°-20°	407.0	8.9
20°-30°	614.8	13.5
30°-40°	741.0	16.2
40°-50°	777.9	17.1
50°-60°	727.8	16.0
60°-70°	601.0	13.2
70°-80°	409.5	9.0
80°-90°	139.7	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°	1164.2	25.5
0°-40°	1905.2	41.8
0°-60°	3410.8	74.8
0°-90°	4561.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4561.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1504	1504	1504	1504	1504	
5°	1501	1500	1492	1501	1501	142
15°	1435	1436	1438	1453	1456	404
25°	1309	1315	1330	1356	1363	602
35°	1138	1150	1180	1220	1232	711
45°	937	956	1005	1059	1079	722
55°	719	748	814	881	906	642
65°	486	527	611	688	716	482
75°	251	309	402	478	505	268
85°	52	101	142	160	166	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1504.2	1504.2	1504.2	1504.2	1504.2
2.5°	1505.7	1504.2	1496.6	1504.2	1502.7
5°	1501.2	1499.6	1492.1	1501.2	1501.2
7.5°	1490.6	1490.6	1483.0	1493.6	1495.1
10°	1475.4	1475.4	1470.9	1483.0	1483.0
12.5°	1457.3	1457.3	1457.3	1469.4	1470.9
15°	1434.6	1436.1	1437.6	1452.7	1455.8
17.5°	1407.3	1410.4	1414.9	1433.1	1436.1
20°	1378.6	1381.6	1389.2	1410.4	1414.9
22.5°	1342.3	1349.8	1360.4	1384.6	1389.2
25°	1309.0	1315.0	1330.2	1355.9	1363.4
27.5°	1268.1	1277.2	1296.9	1324.1	1334.7
30°	1227.3	1236.3	1260.5	1292.3	1301.4
32.5°	1183.4	1197.0	1222.7	1256.0	1266.6
35°	1138.0	1150.1	1180.3	1219.7	1231.8
37.5°	1088.0	1104.7	1138.0	1180.3	1195.5
40°	1039.6	1057.8	1095.6	1141.0	1159.2
42.5°	991.2	1009.3	1051.7	1103.2	1121.3
45°	936.7	956.4	1004.8	1059.3	1079.0
47.5°	882.2	906.4	959.4	1016.9	1038.1
50°	826.2	853.5	911.0	971.5	995.7
52.5°	776.3	802.0	862.6	927.6	950.3
55°	718.8	747.5	814.1	880.7	906.4
57.5°	659.8	691.6	762.7	835.3	861.0
60°	602.3	637.1	715.8	788.4	817.2
62.5°	546.3	581.1	662.8	738.5	767.2
65°	485.8	526.6	611.4	688.5	715.8
67.5°	428.3	472.1	561.4	637.1	664.3
70°	372.3	414.6	510.0	584.1	611.4
72.5°	311.7	360.2	455.5	532.7	561.4
75°	251.2	308.7	402.5	478.2	505.4
77.5°	195.2	254.2	348.0	410.1	423.7
80°	143.8	204.3	286.0	329.9	346.5
82.5°	92.3	152.8	217.9	249.7	263.3
85°	51.5	101.4	142.2	160.4	166.5
87.5°	21.2	43.9	57.5	65.1	65.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)