

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: P310863

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CA125-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: P310863
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 4652.1 lumens
Efficiency: N/A
Efficacy: 119.0 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

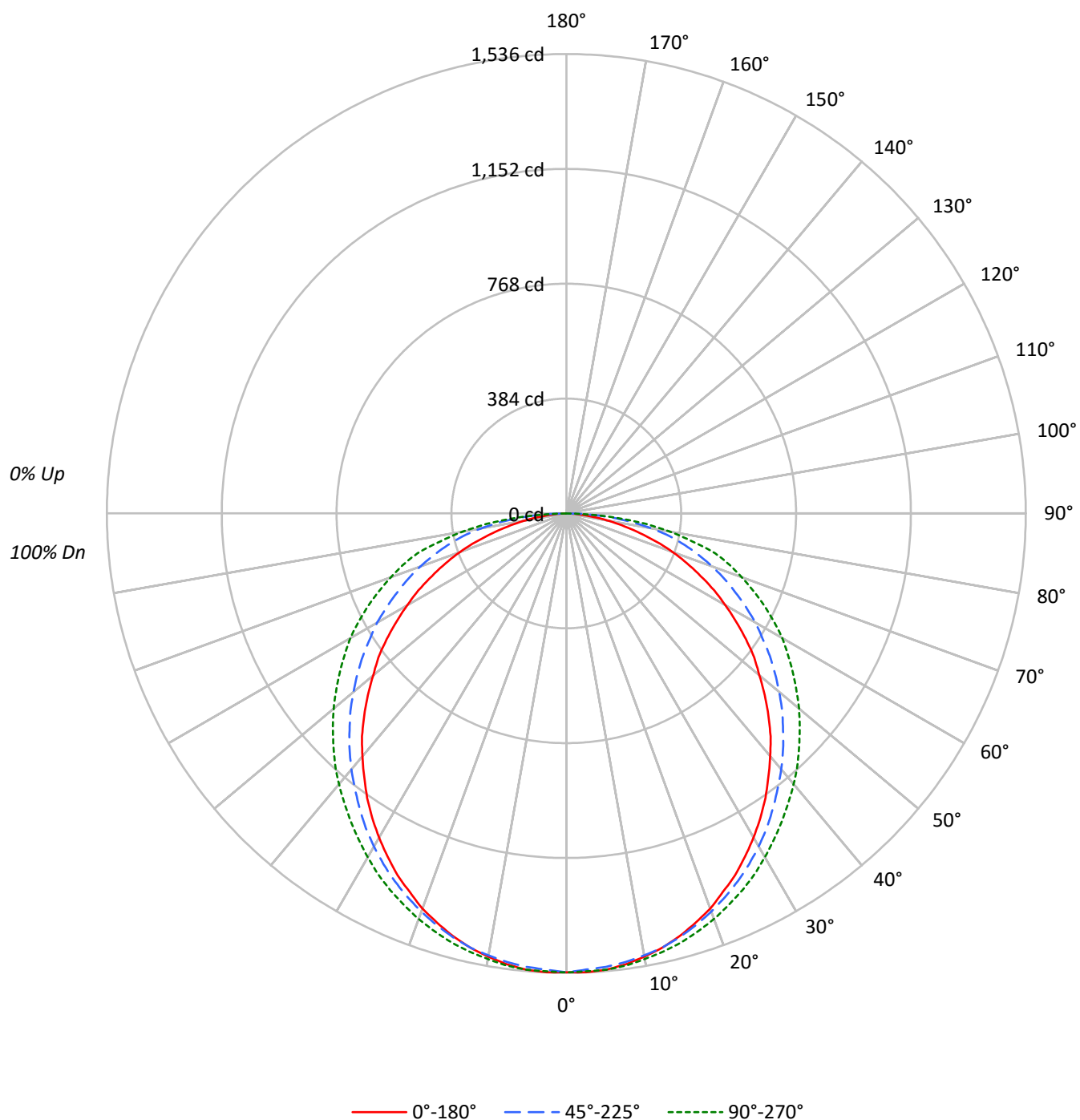
Input Watts (W): 39.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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°	2064	2064	2064
5°	2068	2055	2068
10°	2056	2050	2067
15°	2038	2042	2068
20°	2013	2029	2066
25°	1982	2014	2064
30°	1945	1998	2062
35°	1906	1977	2064
40°	1862	1963	2077
45°	1818	1950	2094
50°	1764	1945	2126
55°	1720	1948	2169
60°	1653	1965	2243
65°	1577	1985	2324
70°	1494	2046	2453
75°	1332	2135	2680
80°	1136	2260	2739
85°	810	2240	2621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.2	3.1
10°-20°	415.2	8.9
20°-30°	627.1	13.5
30°-40°	755.8	16.2
40°-50°	793.4	17.1
50°-60°	742.3	16.0
60°-70°	613.0	13.2
70°-80°	417.7	9.0
80°-90°	142.5	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°	1187.4	25.5
0°-40°	1943.2	41.8
0°-60°	3478.9	74.8
0°-90°	4652.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4652.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1534	1534	1534	1534	1534	
5°	1531	1530	1522	1531	1531	145
15°	1463	1465	1466	1482	1485	412
25°	1335	1341	1357	1383	1391	614
35°	1161	1173	1204	1244	1256	725
45°	955	976	1025	1080	1100	737
55°	733	762	830	898	924	654
65°	495	537	624	702	730	491
75°	256	315	411	488	516	273
85°	52	103	145	164	170	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1534.2	1534.2	1534.2	1534.2	1534.2
2.5°	1535.7	1534.2	1526.5	1534.2	1532.6
5°	1531.1	1529.6	1521.8	1531.1	1531.1
7.5°	1520.3	1520.3	1512.6	1523.4	1524.9
10°	1504.9	1504.9	1500.2	1512.6	1512.6
12.5°	1486.3	1486.3	1486.3	1498.7	1500.2
15°	1463.2	1464.7	1466.3	1481.7	1484.8
17.5°	1435.4	1438.5	1443.1	1461.6	1464.7
20°	1406.1	1409.2	1416.9	1438.5	1443.1
22.5°	1369.0	1376.8	1387.6	1412.3	1416.9
25°	1335.1	1341.3	1356.7	1382.9	1390.6
27.5°	1293.4	1302.7	1322.7	1350.5	1361.3
30°	1251.7	1261.0	1285.7	1318.1	1327.4
32.5°	1207.0	1220.9	1247.1	1281.1	1291.9
35°	1160.7	1173.0	1203.9	1244.0	1256.4
37.5°	1109.7	1126.7	1160.7	1203.9	1219.3
40°	1060.4	1078.9	1117.5	1163.8	1182.3
42.5°	1011.0	1029.5	1072.7	1125.2	1143.7
45°	955.4	975.5	1024.9	1080.4	1100.5
47.5°	899.8	924.5	978.5	1037.2	1058.8
50°	842.7	870.5	929.2	990.9	1015.6
52.5°	791.8	818.0	879.8	946.1	969.3
55°	733.1	762.5	830.4	898.3	924.5
57.5°	672.9	705.4	777.9	852.0	878.2
60°	614.3	649.8	730.1	804.1	833.5
62.5°	557.2	592.7	676.0	753.2	782.5
65°	495.4	537.1	623.6	702.3	730.1
67.5°	436.8	481.6	572.6	649.8	677.6
70°	379.7	422.9	520.1	595.8	623.6
72.5°	318.0	367.3	464.6	543.3	572.6
75°	256.2	314.9	410.6	487.7	515.5
77.5°	199.1	259.3	355.0	418.3	432.2
80°	146.6	208.4	291.7	336.5	353.5
82.5°	94.2	155.9	222.3	254.7	268.6
85°	52.5	103.4	145.1	163.6	169.8
87.5°	21.6	44.8	58.7	66.4	66.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)