

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: P310856

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CA08-W2A-U-5500K**

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: P310856
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 4778.0 lumens
Efficiency: N/A
Efficacy: 121.0 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

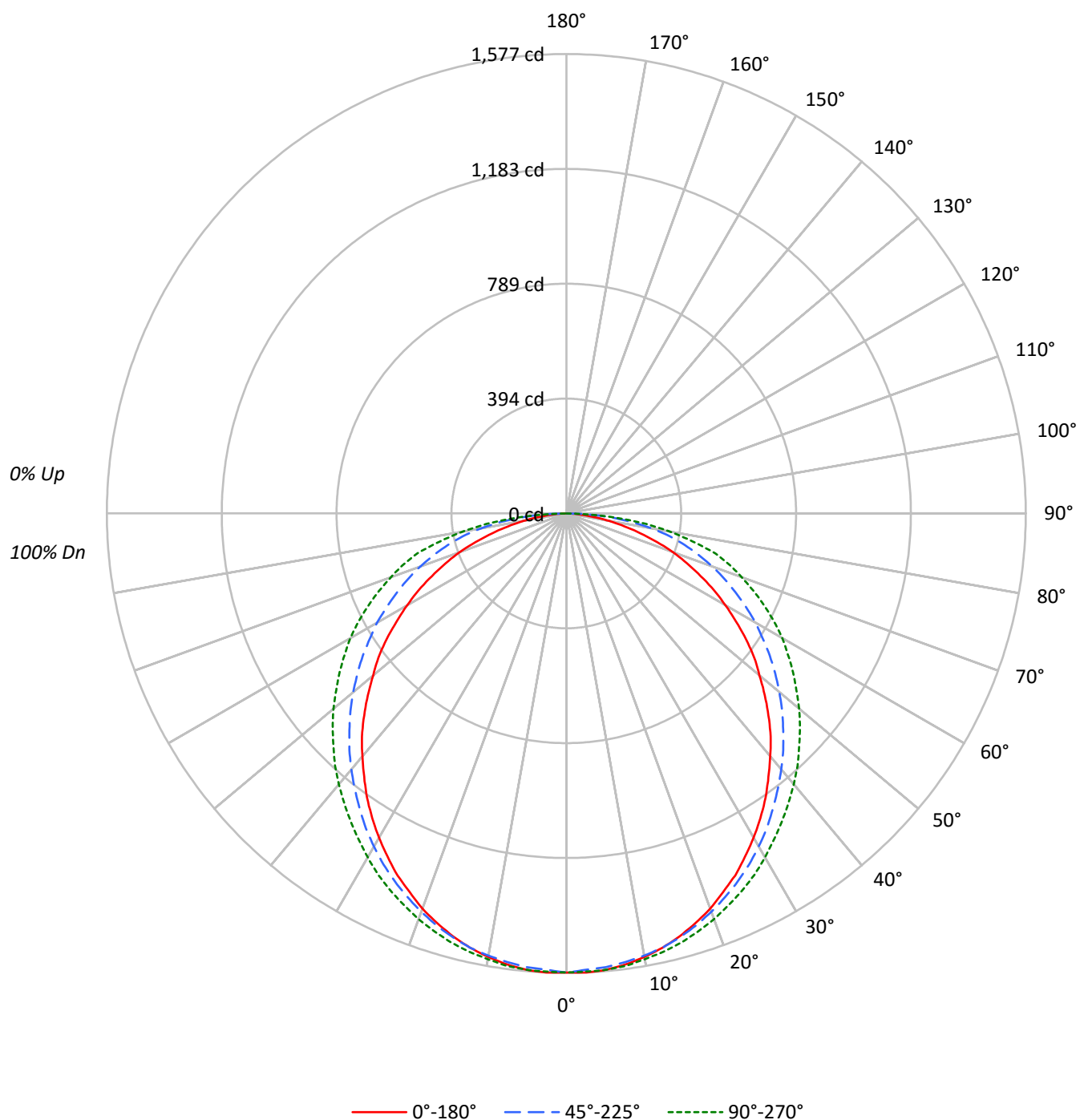
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2120	2120	2120
5°	2124	2111	2124
10°	2112	2105	2122
15°	2093	2098	2124
20°	2068	2084	2122
25°	2036	2069	2120
30°	1997	2052	2118
35°	1958	2031	2120
40°	1913	2016	2133
45°	1867	2003	2151
50°	1812	1998	2183
55°	1766	2001	2228
60°	1698	2018	2303
65°	1620	2039	2387
70°	1534	2102	2519
75°	1368	2192	2753
80°	1167	2321	2813
85°	832	2300	2692



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.1	3.1
10°-20°	426.4	8.9
20°-30°	644.0	13.5
30°-40°	776.2	16.2
40°-50°	814.9	17.1
50°-60°	762.4	16.0
60°-70°	629.6	13.2
70°-80°	429.0	9.0
80°-90°	146.3	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°	1219.6	25.5
0°-40°	1995.8	41.8
0°-60°	3573.1	74.8
0°-90°	4778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4778.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1576	1576	1576	1576	1576	
5°	1573	1571	1563	1573	1573	149
15°	1503	1504	1506	1522	1525	424
25°	1371	1378	1393	1420	1428	631
35°	1192	1205	1236	1278	1290	745
45°	981	1002	1053	1110	1130	757
55°	753	783	853	923	950	672
65°	509	552	640	721	750	505
75°	263	323	422	501	530	281
85°	54	106	149	168	174	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1575.7	1575.7	1575.7	1575.7	1575.7
2.5°	1577.3	1575.7	1567.8	1575.7	1574.2
5°	1572.6	1571.0	1563.1	1572.6	1572.6
7.5°	1561.5	1561.5	1553.5	1564.6	1566.2
10°	1545.6	1545.6	1540.9	1553.5	1553.5
12.5°	1526.6	1526.6	1526.6	1539.3	1540.9
15°	1502.8	1504.4	1506.0	1521.8	1525.0
17.5°	1474.3	1477.5	1482.2	1501.2	1504.4
20°	1444.2	1447.3	1455.3	1477.5	1482.2
22.5°	1406.1	1414.0	1425.1	1450.5	1455.3
25°	1371.2	1377.6	1393.4	1420.4	1428.3
27.5°	1328.4	1338.0	1358.6	1387.1	1398.2
30°	1285.6	1295.2	1320.5	1353.8	1363.3
32.5°	1239.7	1253.9	1280.9	1315.8	1326.9
35°	1192.1	1204.8	1236.5	1277.7	1290.4
37.5°	1139.8	1157.2	1192.1	1236.5	1252.4
40°	1089.1	1108.1	1147.7	1195.3	1214.3
42.5°	1038.3	1057.4	1101.8	1155.7	1174.7
45°	981.3	1001.9	1052.6	1109.7	1130.3
47.5°	924.2	949.6	1005.1	1065.3	1087.5
50°	865.5	894.1	954.3	1017.7	1043.1
52.5°	813.2	840.2	903.6	971.8	995.5
55°	753.0	783.1	852.9	922.6	949.6
57.5°	691.2	724.5	799.0	875.1	902.0
60°	630.9	667.4	749.8	825.9	856.0
62.5°	572.3	608.7	694.3	773.6	803.7
65°	508.9	551.7	640.4	721.3	749.8
67.5°	448.6	494.6	588.1	667.4	695.9
70°	390.0	434.4	534.2	611.9	640.4
72.5°	326.6	377.3	477.2	558.0	588.1
75°	263.2	323.4	421.7	500.9	529.5
77.5°	204.5	266.3	364.6	429.6	443.9
80°	150.6	214.0	299.6	345.6	363.0
82.5°	96.7	160.1	228.3	261.6	275.8
85°	53.9	106.2	149.0	168.0	174.4
87.5°	22.2	46.0	60.2	68.2	68.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)