

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: P314029

Luminaire Tested: **24FCZ2-50-UNV-L83050-CP125-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: P314029
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: 24FCZ2-50-UNV-L83050-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 4736.0 lumens
Efficiency: N/A
Efficacy: 105.7 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

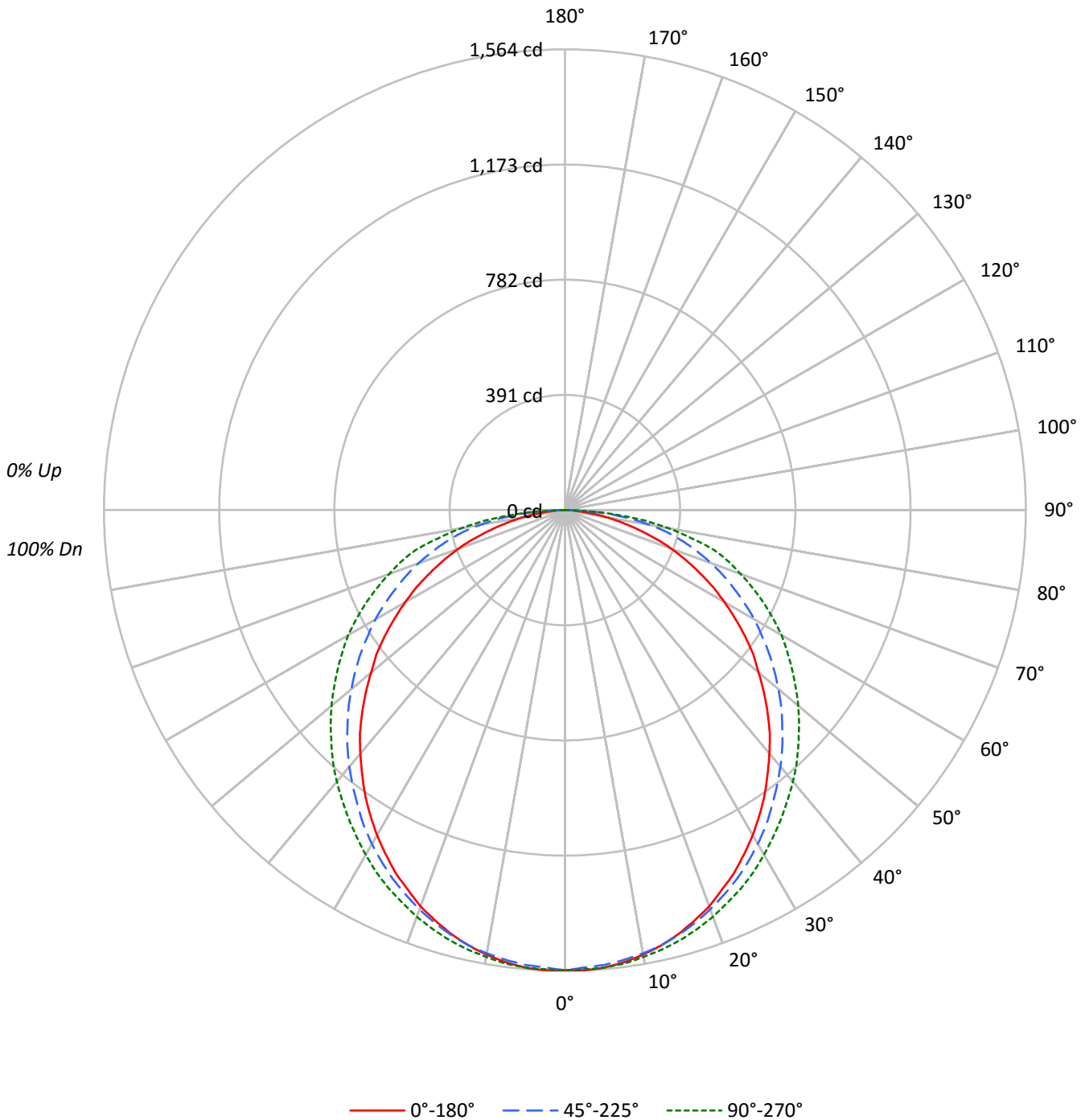
Input Watts (W): 44.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	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°	2102	2102	2102
5°	2105	2093	2105
10°	2093	2087	2104
15°	2075	2079	2106
20°	2050	2065	2104
25°	2018	2051	2102
30°	1980	2034	2099
35°	1941	2013	2101
40°	1896	1998	2114
45°	1851	1985	2132
50°	1796	1980	2164
55°	1751	1983	2208
60°	1683	2000	2283
65°	1606	2021	2366
70°	1520	2083	2497
75°	1356	2173	2728
80°	1157	2301	2788
85°	824	2280	2668



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.8	3.1
10°-20°	422.7	8.9
20°-30°	638.4	13.5
30°-40°	769.4	16.2
40°-50°	807.7	17.1
50°-60°	755.7	16.0
60°-70°	624.1	13.2
70°-80°	425.2	9.0
80°-90°	145.0	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°	1208.9	25.5
0°-40°	1978.3	41.8
0°-60°	3541.7	74.8
0°-90°	4736.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4736.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1562	1562	1562	1562	1562	
5°	1559	1557	1549	1559	1559	148
15°	1490	1491	1493	1508	1512	420
25°	1359	1366	1381	1408	1416	625
35°	1182	1194	1226	1266	1279	738
45°	973	993	1043	1100	1120	750
55°	746	776	845	914	941	666
65°	504	547	635	715	743	500
75°	261	320	418	496	525	278
85°	53	105	148	167	173	67
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°	1563.5	1561.9	1554.0	1561.9	1560.3
5°	1558.7	1557.2	1549.3	1558.7	1558.7
7.5°	1547.7	1547.7	1539.9	1550.9	1552.5
10°	1532.0	1532.0	1527.3	1539.9	1539.9
12.5°	1513.2	1513.2	1513.2	1525.8	1527.3
15°	1489.6	1491.2	1492.8	1508.5	1511.6
17.5°	1461.3	1464.5	1469.2	1488.0	1491.2
20°	1431.5	1434.6	1442.5	1464.5	1469.2
22.5°	1393.8	1401.6	1412.6	1437.8	1442.5
25°	1359.2	1365.5	1381.2	1407.9	1415.8
27.5°	1316.8	1326.2	1346.6	1374.9	1385.9
30°	1274.3	1283.8	1308.9	1341.9	1351.3
32.5°	1228.8	1242.9	1269.6	1304.2	1315.2
35°	1181.6	1194.2	1225.6	1266.5	1279.1
37.5°	1129.8	1147.1	1181.6	1225.6	1241.3
40°	1079.5	1098.4	1137.6	1184.8	1203.6
42.5°	1029.2	1048.1	1092.1	1145.5	1164.3
45°	972.6	993.1	1043.4	1099.9	1120.4
47.5°	916.1	941.2	996.2	1055.9	1077.9
50°	857.9	886.2	945.9	1008.8	1033.9
52.5°	806.1	832.8	895.7	963.2	986.8
55°	746.4	776.2	845.4	914.5	941.2
57.5°	685.1	718.1	791.9	867.4	894.1
60°	625.4	661.5	743.2	818.7	848.5
62.5°	567.2	603.4	688.2	766.8	796.7
65°	504.4	546.8	634.8	715.0	743.2
67.5°	444.7	490.3	583.0	661.5	689.8
70°	386.5	430.5	529.5	606.5	634.8
72.5°	323.7	374.0	473.0	553.1	583.0
75°	260.8	320.5	418.0	496.5	524.8
77.5°	202.7	264.0	361.4	425.8	440.0
80°	149.3	212.1	297.0	342.5	359.8
82.5°	95.9	158.7	226.3	259.3	273.4
85°	53.4	105.3	147.7	166.6	172.8
87.5°	22.0	45.6	59.7	67.6	67.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)