

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: P314027

Luminaire Tested: **24FCZ2-50-UNV-L83050-CP125-W2A-U-4000K**

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: P314027
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-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4000K 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: 4692.0 lumens
Efficiency: N/A
Efficacy: 107.4 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

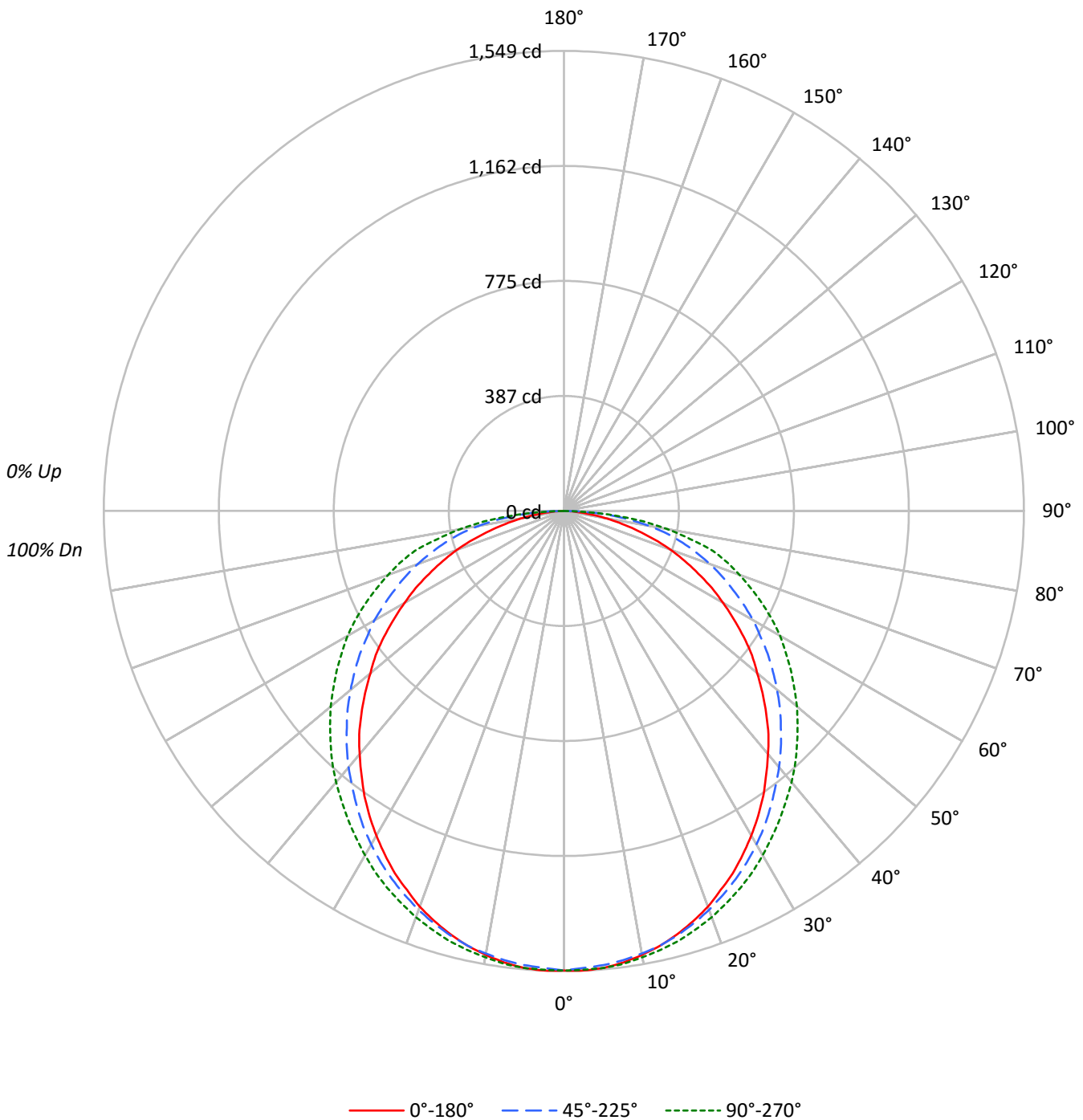
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2082	2082	2082
5°	2086	2073	2086
10°	2074	2067	2084
15°	2056	2060	2086
20°	2031	2046	2084
25°	1999	2032	2082
30°	1961	2015	2080
35°	1923	1994	2081
40°	1878	1980	2094
45°	1834	1967	2112
50°	1779	1962	2144
55°	1734	1965	2187
60°	1667	1981	2262
65°	1591	2002	2344
70°	1507	2064	2474
75°	1343	2153	2703
80°	1146	2280	2762
85°	817	2259	2643



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.4	3.1
10°-20°	418.7	8.9
20°-30°	632.5	13.5
30°-40°	762.3	16.2
40°-50°	800.2	17.1
50°-60°	748.7	16.0
60°-70°	618.3	13.2
70°-80°	421.3	9.0
80°-90°	143.7	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°	1197.6	25.5
0°-40°	1959.9	41.8
0°-60°	3508.8	74.8
0°-90°	4692.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4692.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1547	1547	1547	1547	1547	
5°	1544	1543	1535	1544	1544	147
15°	1476	1477	1479	1494	1498	416
25°	1347	1353	1368	1395	1403	620
35°	1171	1183	1214	1255	1267	732
45°	964	984	1034	1090	1110	743
55°	739	769	838	906	932	660
65°	500	542	629	708	736	496
75°	258	318	414	492	520	276
85°	53	104	146	165	171	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1547.4	1547.4	1547.4	1547.4	1547.4
2.5°	1548.9	1547.4	1539.6	1547.4	1545.8
5°	1544.3	1542.7	1534.9	1544.3	1544.3
7.5°	1533.4	1533.4	1525.6	1536.5	1538.0
10°	1517.8	1517.8	1513.1	1525.6	1525.6
12.5°	1499.1	1499.1	1499.1	1511.6	1513.1
15°	1475.8	1477.3	1478.9	1494.5	1497.6
17.5°	1447.8	1450.9	1455.5	1474.2	1477.3
20°	1418.2	1421.3	1429.1	1450.9	1455.5
22.5°	1380.8	1388.6	1399.5	1424.4	1429.1
25°	1346.6	1352.8	1368.4	1394.8	1402.6
27.5°	1304.5	1313.9	1334.1	1362.1	1373.0
30°	1262.5	1271.8	1296.7	1329.4	1338.8
32.5°	1217.4	1231.4	1257.8	1292.1	1303.0
35°	1170.7	1183.1	1214.2	1254.7	1267.2
37.5°	1119.3	1136.4	1170.7	1214.2	1229.8
40°	1069.5	1088.1	1127.1	1173.8	1192.4
42.5°	1019.7	1038.3	1081.9	1134.8	1153.5
45°	963.6	983.8	1033.7	1089.7	1109.9
47.5°	907.6	932.5	987.0	1046.1	1067.9
50°	850.0	878.0	937.1	999.4	1024.3
52.5°	798.6	825.1	887.3	954.3	977.6
55°	739.4	769.0	837.5	906.0	932.5
57.5°	678.7	711.4	784.6	859.3	885.8
60°	619.6	655.4	736.3	811.1	840.6
62.5°	562.0	597.8	681.8	759.7	789.3
65°	499.7	541.7	628.9	708.3	736.3
67.5°	440.6	485.7	577.5	655.4	683.4
70°	383.0	426.5	524.6	600.9	628.9
72.5°	320.7	370.5	468.6	548.0	577.5
75°	258.4	317.6	414.1	491.9	519.9
77.5°	200.8	261.5	358.0	421.9	435.9
80°	147.9	210.2	294.2	339.4	356.5
82.5°	95.0	157.2	224.2	256.9	270.9
85°	52.9	104.3	146.3	165.0	171.2
87.5°	21.8	45.1	59.2	66.9	66.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)