

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: P314001

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-CP125-W2A-U-3500K**

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: P314001
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-L83050-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3500K 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: 4490.0 lumens
Efficiency: N/A
Efficacy: 116.9 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

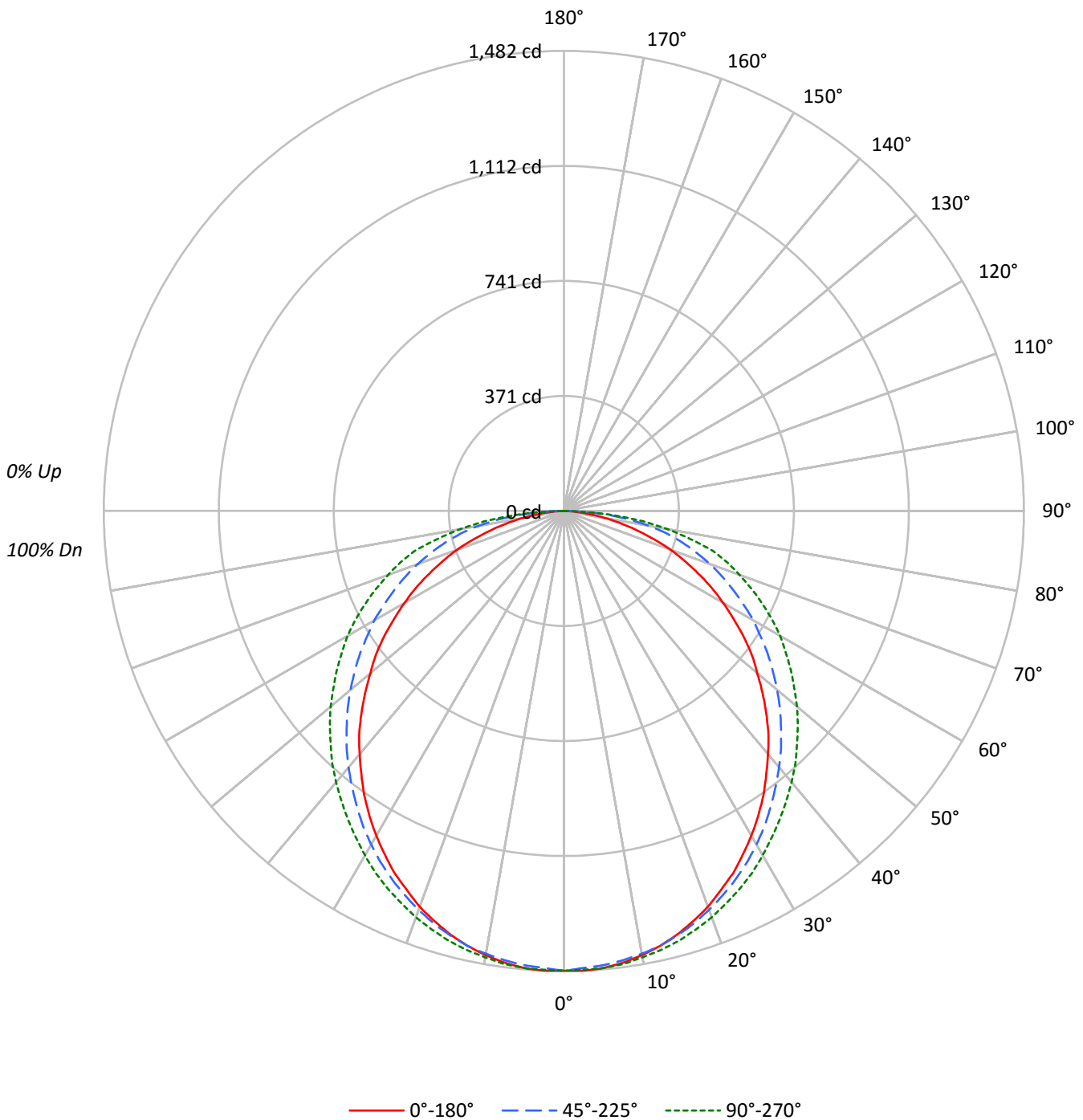
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1992	1992	1992
5°	1996	1984	1996
10°	1984	1978	1995
15°	1967	1971	1996
20°	1943	1958	1994
25°	1913	1944	1993
30°	1877	1928	1990
35°	1840	1909	1992
40°	1798	1894	2004
45°	1755	1882	2021
50°	1703	1877	2052
55°	1660	1880	2093
60°	1595	1896	2165
65°	1522	1916	2243
70°	1442	1975	2367
75°	1286	2060	2587
80°	1096	2182	2643
85°	781	2161	2530



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.1	3.1
10°-20°	400.7	8.9
20°-30°	605.2	13.5
30°-40°	729.4	16.2
40°-50°	765.8	17.1
50°-60°	716.4	16.0
60°-70°	591.6	13.2
70°-80°	403.2	9.0
80°-90°	137.5	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°	1146.1	25.5
0°-40°	1875.5	41.8
0°-60°	3357.7	74.8
0°-90°	4490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1481	1481	1481	1481	1481	
5°	1478	1476	1469	1478	1478	140
15°	1412	1414	1415	1430	1433	398
25°	1289	1295	1309	1335	1342	593
35°	1120	1132	1162	1201	1213	700
45°	922	942	989	1043	1062	711
55°	708	736	802	867	892	632
65°	478	518	602	678	705	474
75°	247	304	396	471	498	264
85°	51	100	140	158	164	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1480.8	1480.8	1480.8	1480.8	1480.8
2.5°	1482.3	1480.8	1473.3	1480.8	1479.3
5°	1477.8	1476.3	1468.8	1477.8	1477.8
7.5°	1467.4	1467.4	1459.9	1470.3	1471.8
10°	1452.5	1452.5	1448.0	1459.9	1459.9
12.5°	1434.6	1434.6	1434.6	1446.5	1448.0
15°	1412.2	1413.7	1415.2	1430.1	1433.1
17.5°	1385.4	1388.4	1392.9	1410.7	1413.7
20°	1357.1	1360.1	1367.5	1388.4	1392.9
22.5°	1321.4	1328.8	1339.2	1363.1	1367.5
25°	1288.6	1294.6	1309.4	1334.8	1342.2
27.5°	1248.4	1257.3	1276.7	1303.5	1313.9
30°	1208.1	1217.1	1240.9	1272.2	1281.1
32.5°	1164.9	1178.4	1203.7	1236.5	1246.9
35°	1120.3	1132.2	1162.0	1200.7	1212.6
37.5°	1071.1	1087.5	1120.3	1162.0	1176.9
40°	1023.4	1041.3	1078.5	1123.2	1141.1
42.5°	975.8	993.6	1035.3	1086.0	1103.9
45°	922.1	941.5	989.2	1042.8	1062.2
47.5°	868.5	892.3	944.5	1001.1	1021.9
50°	813.4	840.2	896.8	956.4	980.2
52.5°	764.2	789.5	849.1	913.2	935.5
55°	707.6	735.9	801.5	867.0	892.3
57.5°	649.5	680.8	750.8	822.3	847.6
60°	592.9	627.2	704.6	776.1	804.4
62.5°	537.8	572.0	652.5	727.0	755.3
65°	478.2	518.4	601.8	677.8	704.6
67.5°	421.6	464.8	552.7	627.2	654.0
70°	366.5	408.2	502.0	575.0	601.8
72.5°	306.9	354.5	448.4	524.4	552.7
75°	247.3	303.9	396.3	470.7	497.6
77.5°	192.2	250.3	342.6	403.7	417.1
80°	141.5	201.1	281.6	324.8	341.1
82.5°	90.9	150.5	214.5	245.8	259.2
85°	50.6	99.8	140.0	157.9	163.9
87.5°	20.9	43.2	56.6	64.1	64.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)