

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: P314002

Luminaire Tested: **24FCZ2-50HE-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: P314002  
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-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 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**

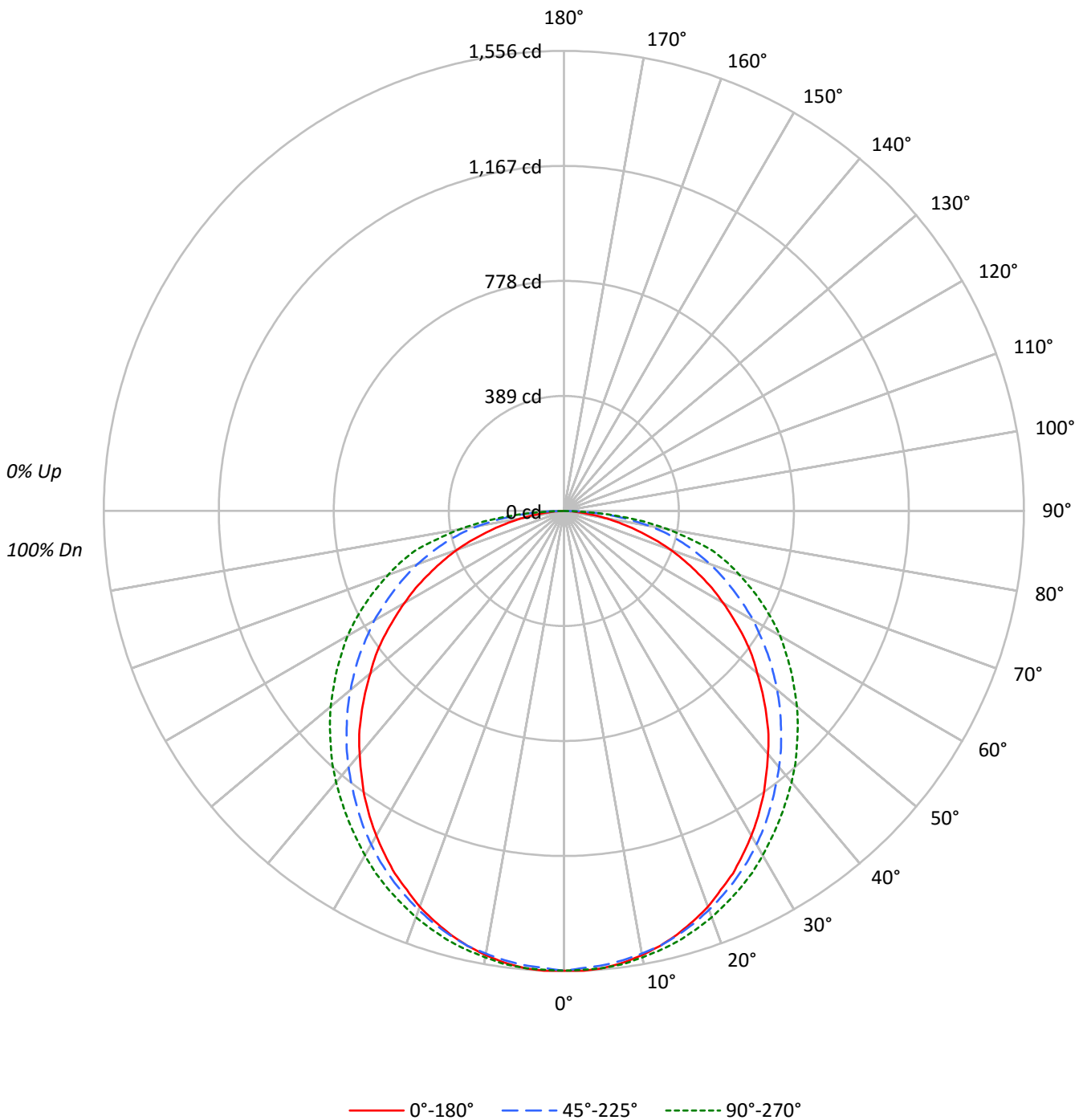
Lumens per Lamp: N/A  
Luminaire Lumens: 4714.0 lumens  
Efficiency: N/A  
Efficacy: 119.9 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 39.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2092	2092	2092
5°	2096	2083	2096
10°	2083	2077	2094
15°	2065	2070	2096
20°	2040	2056	2094
25°	2008	2041	2092
30°	1971	2024	2090
35°	1932	2004	2091
40°	1887	1989	2104
45°	1842	1976	2122
50°	1788	1971	2154
55°	1743	1974	2198
60°	1675	1991	2273
65°	1599	2012	2355
70°	1513	2074	2486
75°	1350	2163	2716
80°	1151	2290	2775
85°	821	2269	2655



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.1	3.1
10°-20°	420.7	8.9
20°-30°	635.4	13.5
30°-40°	765.8	16.2
40°-50°	804.0	17.1
50°-60°	752.2	16.0
60°-70°	621.2	13.2
70°-80°	423.3	9.0
80°-90°	144.4	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°	1203.3	25.5
0°-40°	1969.1	41.8
0°-60°	3525.2	74.8
0°-90°	4714.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4714.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1555	1555	1555	1555	1555	
5°	1552	1550	1542	1552	1552	147
15°	1483	1484	1486	1502	1505	418
25°	1353	1359	1375	1401	1409	622
35°	1176	1189	1220	1261	1273	735
45°	968	988	1038	1095	1115	747
55°	743	773	841	910	937	663
65°	502	544	632	712	740	498
75°	260	319	416	494	522	277
85°	53	105	147	166	172	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1554.6	1554.6	1554.6	1554.6	1554.6
2.5°	1556.2	1554.6	1546.8	1554.6	1553.1
5°	1551.5	1549.9	1542.1	1551.5	1551.5
7.5°	1540.6	1540.6	1532.7	1543.7	1545.3
10°	1524.9	1524.9	1520.2	1532.7	1532.7
12.5°	1506.2	1506.2	1506.2	1518.7	1520.2
15°	1482.7	1484.3	1485.8	1501.5	1504.6
17.5°	1454.5	1457.7	1462.4	1481.1	1484.3
20°	1424.8	1428.0	1435.8	1457.7	1462.4
22.5°	1387.3	1395.1	1406.1	1431.1	1435.8
25°	1352.9	1359.1	1374.8	1401.4	1409.2
27.5°	1310.6	1320.0	1340.4	1368.5	1379.5
30°	1268.4	1277.8	1302.8	1335.7	1345.1
32.5°	1223.1	1237.1	1263.7	1298.1	1309.1
35°	1176.1	1188.7	1219.9	1260.6	1273.1
37.5°	1124.5	1141.7	1176.1	1219.9	1235.6
40°	1074.5	1093.3	1132.4	1179.3	1198.0
42.5°	1024.4	1043.2	1087.0	1140.2	1158.9
45°	968.1	988.5	1038.5	1094.8	1115.1
47.5°	911.8	936.8	991.6	1051.0	1072.9
50°	854.0	882.1	941.5	1004.1	1029.1
52.5°	802.3	828.9	891.5	958.7	982.2
55°	742.9	772.6	841.4	910.3	936.8
57.5°	681.9	714.8	788.3	863.3	889.9
60°	622.5	658.5	739.8	814.9	844.6
62.5°	564.6	600.6	685.0	763.2	793.0
65°	502.1	544.3	631.9	711.6	739.8
67.5°	442.6	488.0	580.3	658.5	686.6
70°	384.7	428.5	527.1	603.7	631.9
72.5°	322.2	372.2	470.8	550.5	580.3
75°	259.6	319.1	416.0	494.2	522.4
77.5°	201.8	262.8	359.7	423.8	437.9
80°	148.6	211.1	295.6	341.0	358.2
82.5°	95.4	158.0	225.2	258.1	272.1
85°	53.2	104.8	147.0	165.8	172.0
87.5°	21.9	45.4	59.4	67.3	67.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)