

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: P313953

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-CP125-W2A-U-4500K**

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: P313953  
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: 24FCZ2-45HE-UNV-L83050-CP125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 4500K 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**

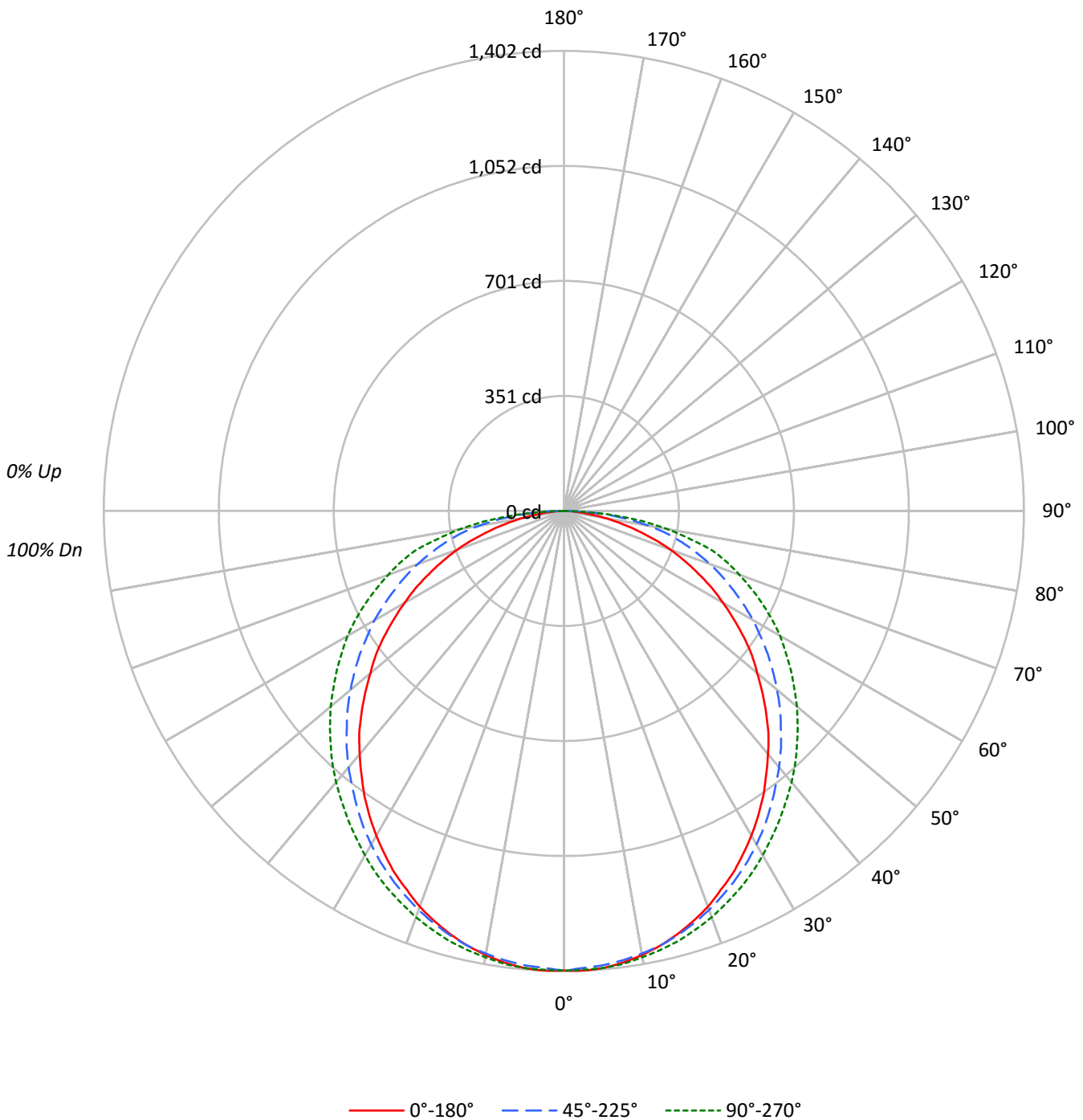
Lumens per Lamp: N/A  
Luminaire Lumens: 4247.0 lumens  
Efficiency: N/A  
Efficacy: 119.6 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 35.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1884	1884	1884
5°	1888	1877	1888
10°	1877	1871	1887
15°	1861	1865	1888
20°	1838	1852	1886
25°	1810	1839	1885
30°	1775	1824	1883
35°	1740	1805	1884
40°	1700	1792	1896
45°	1660	1780	1912
50°	1611	1776	1941
55°	1570	1778	1980
60°	1509	1794	2048
65°	1440	1812	2122
70°	1364	1868	2240
75°	1216	1948	2446
80°	1038	2063	2500
85°	739	2046	2393



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.6	3.1
10°-20°	379.0	8.9
20°-30°	572.5	13.5
30°-40°	690.0	16.2
40°-50°	724.3	17.1
50°-60°	677.7	16.0
60°-70°	559.6	13.2
70°-80°	381.3	9.0
80°-90°	130.1	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°	1084.0	25.5
0°-40°	1774.0	41.8
0°-60°	3176.0	74.8
0°-90°	4247.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4247.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1401	1401	1401	1401	1401	
5°	1398	1396	1389	1398	1398	133
15°	1336	1337	1339	1353	1356	377
25°	1219	1224	1239	1262	1270	561
35°	1060	1071	1099	1136	1147	662
45°	872	890	936	986	1005	673
55°	669	696	758	820	844	597
65°	452	490	569	641	666	449
75°	234	288	375	445	471	249
85°	48	94	132	149	155	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1400.6	1400.6	1400.6	1400.6	1400.6
2.5°	1402.0	1400.6	1393.6	1400.6	1399.2
5°	1397.8	1396.4	1389.4	1397.8	1397.8
7.5°	1387.9	1387.9	1380.9	1390.8	1392.2
10°	1373.9	1373.9	1369.6	1380.9	1380.9
12.5°	1356.9	1356.9	1356.9	1368.2	1369.6
15°	1335.8	1337.2	1338.6	1352.7	1355.5
17.5°	1310.4	1313.3	1317.5	1334.4	1337.2
20°	1283.7	1286.5	1293.5	1313.3	1317.5
22.5°	1249.9	1256.9	1266.8	1289.3	1293.5
25°	1218.9	1224.5	1238.6	1262.5	1269.6
27.5°	1180.8	1189.3	1207.6	1232.9	1242.8
30°	1142.8	1151.2	1173.8	1203.4	1211.8
32.5°	1101.9	1114.6	1138.5	1169.5	1179.4
35°	1059.6	1070.9	1099.1	1135.7	1147.0
37.5°	1013.1	1028.6	1059.6	1099.1	1113.2
40°	968.0	984.9	1020.2	1062.4	1079.4
42.5°	922.9	939.9	979.3	1027.2	1044.1
45°	872.2	890.5	935.6	986.4	1004.7
47.5°	821.5	844.0	893.4	946.9	966.6
50°	769.4	794.7	848.3	904.6	927.2
52.5°	722.9	746.8	803.2	863.8	884.9
55°	669.3	696.1	758.1	820.1	844.0
57.5°	614.4	643.9	710.2	777.8	801.8
60°	560.8	593.2	666.5	734.1	760.9
62.5°	508.7	541.1	617.2	687.6	714.4
65°	452.3	490.4	569.3	641.1	666.5
67.5°	398.8	439.6	522.8	593.2	618.6
70°	346.6	386.1	474.9	543.9	569.3
72.5°	290.3	335.4	424.1	496.0	522.8
75°	233.9	287.5	374.8	445.3	470.6
77.5°	181.8	236.7	324.1	381.9	394.5
80°	133.9	190.2	266.3	307.2	322.7
82.5°	86.0	142.3	202.9	232.5	245.2
85°	47.9	94.4	132.5	149.4	155.0
87.5°	19.7	40.9	53.5	60.6	60.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)