

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: P310695

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CP125-W2A-U-5700K**

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: P310695  
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: 24FCZ2-40HE-UNV-L82765-CP125-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 5700K 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**

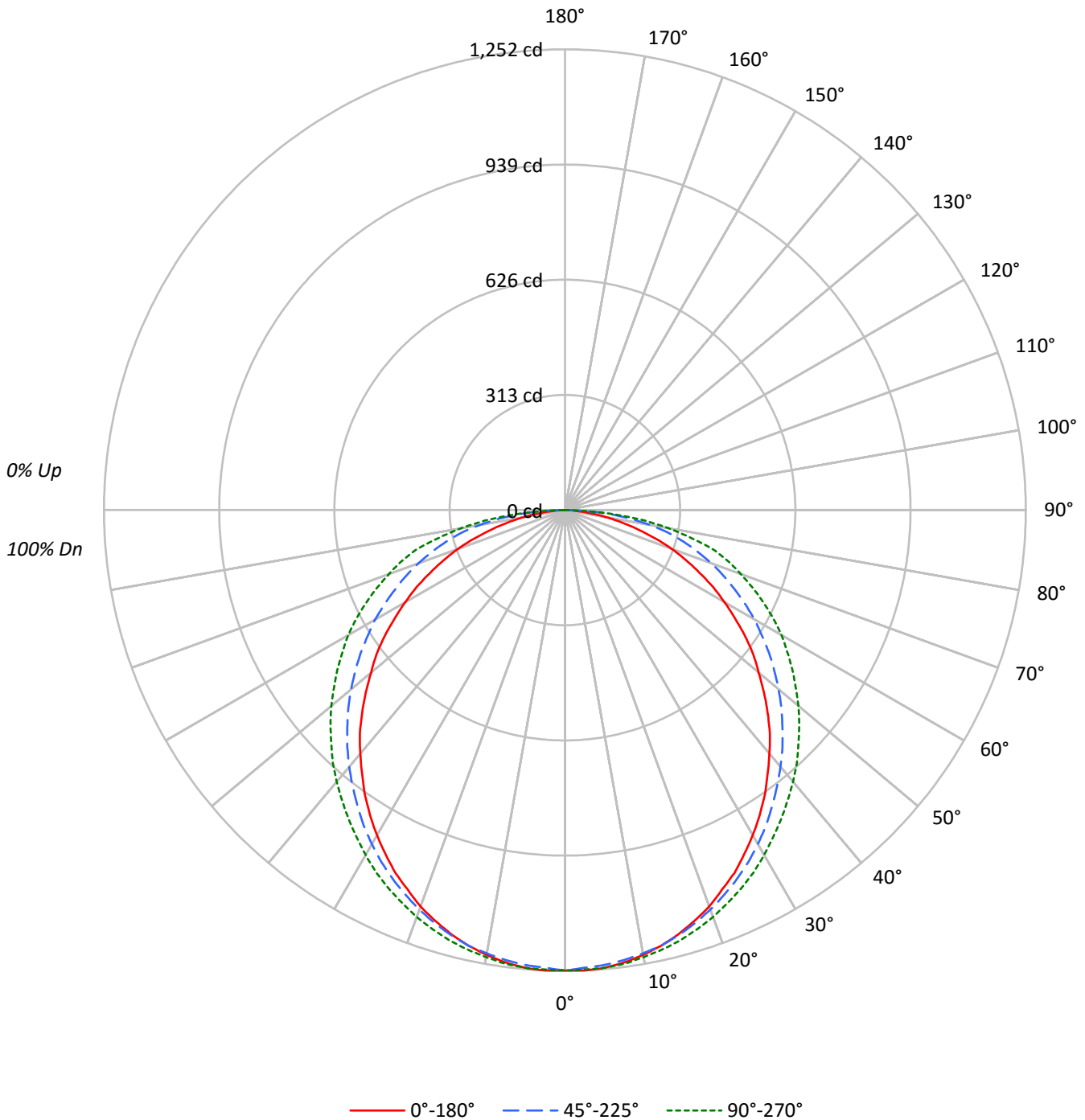
Lumens per Lamp: N/A  
Luminaire Lumens: 3793.0 lumens  
Efficiency: N/A  
Efficacy: 121.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1683	1683	1683
5°	1686	1676	1686
10°	1676	1671	1685
15°	1662	1665	1686
20°	1641	1654	1685
25°	1616	1642	1683
30°	1586	1629	1682
35°	1554	1612	1683
40°	1519	1600	1693
45°	1482	1590	1707
50°	1438	1586	1733
55°	1402	1588	1768
60°	1348	1602	1829
65°	1286	1619	1895
70°	1218	1668	2000
75°	1086	1740	2185
80°	927	1843	2233
85°	661	1826	2137



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.4	3.1
10°-20°	338.5	8.9
20°-30°	511.3	13.5
30°-40°	616.2	16.2
40°-50°	646.9	17.1
50°-60°	605.2	16.0
60°-70°	499.8	13.2
70°-80°	340.6	9.0
80°-90°	116.1	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°	968.2	25.5
0°-40°	1584.4	41.8
0°-60°	2836.5	74.8
0°-90°	3793.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3793.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1248	1247	1241	1248	1248	118
15°	1193	1194	1196	1208	1211	336
25°	1089	1094	1106	1128	1134	501
35°	946	956	982	1014	1024	591
45°	779	795	836	881	897	601
55°	598	622	677	732	754	534
65°	404	438	508	573	595	401
75°	209	257	335	398	420	223
85°	43	84	118	133	138	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1250.9	1250.9	1250.9	1250.9	1250.9
2.5°	1252.2	1250.9	1244.6	1250.9	1249.6
5°	1248.4	1247.1	1240.8	1248.4	1248.4
7.5°	1239.6	1239.6	1233.3	1242.1	1243.3
10°	1227.0	1227.0	1223.2	1233.3	1233.3
12.5°	1211.9	1211.9	1211.9	1222.0	1223.2
15°	1193.0	1194.3	1195.5	1208.1	1210.6
17.5°	1170.4	1172.9	1176.6	1191.8	1194.3
20°	1146.4	1149.0	1155.3	1172.9	1176.6
22.5°	1116.2	1122.5	1131.3	1151.5	1155.3
25°	1088.6	1093.6	1106.2	1127.6	1133.9
27.5°	1054.6	1062.1	1078.5	1101.1	1110.0
30°	1020.6	1028.2	1048.3	1074.7	1082.3
32.5°	984.1	995.4	1016.8	1044.5	1053.3
35°	946.4	956.4	981.6	1014.3	1024.4
37.5°	904.8	918.7	946.4	981.6	994.2
40°	864.6	879.7	911.1	948.9	964.0
42.5°	824.3	839.4	874.6	917.4	932.5
45°	779.0	795.3	835.6	880.9	897.3
47.5°	733.7	753.8	797.9	845.7	863.3
50°	687.1	709.8	757.6	807.9	828.1
52.5°	645.6	667.0	717.3	771.4	790.3
55°	597.8	621.7	677.0	732.4	753.8
57.5°	548.7	575.1	634.3	694.7	716.1
60°	500.9	529.8	595.2	655.7	679.6
62.5°	454.3	483.2	551.2	614.1	638.0
65°	404.0	437.9	508.4	572.6	595.2
67.5°	356.1	392.6	466.9	529.8	552.5
70°	309.6	344.8	424.1	485.8	508.4
72.5°	259.2	299.5	378.8	443.0	466.9
75°	208.9	256.7	334.7	397.7	420.3
77.5°	162.3	211.4	289.4	341.0	352.4
80°	119.6	169.9	237.8	274.3	288.2
82.5°	76.8	127.1	181.2	207.6	219.0
85°	42.8	84.3	118.3	133.4	138.4
87.5°	17.6	36.5	47.8	54.1	54.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)