

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: P310675

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CA08-W2A-U-5000K**

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: P310675  
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-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 5000K 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**

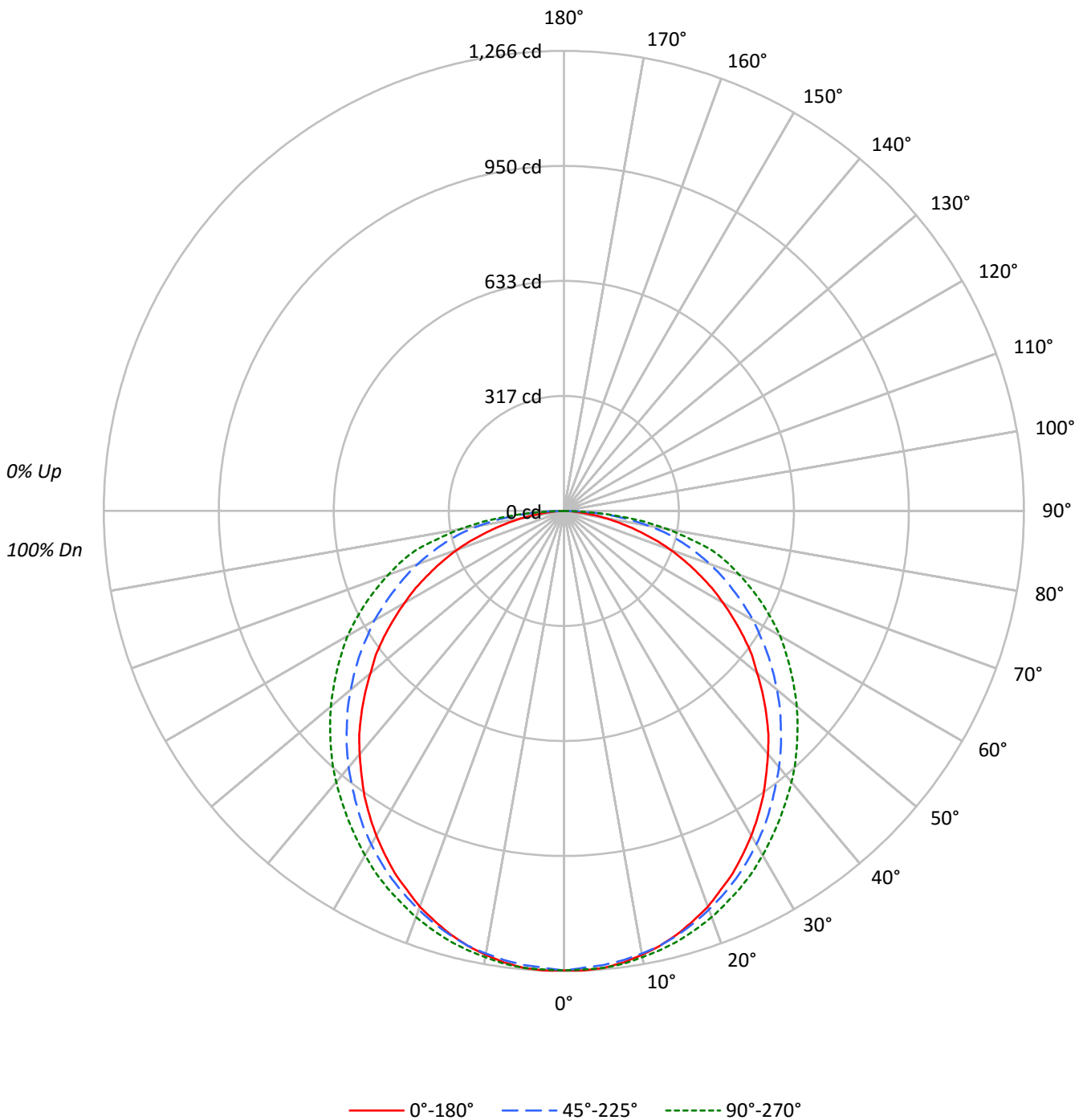
Lumens per Lamp: N/A  
Luminaire Lumens: 3834.0 lumens  
Efficiency: N/A  
Efficacy: 123.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31.1  
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°	1701	1701	1701
5°	1704	1694	1704
10°	1695	1689	1703
15°	1680	1683	1705
20°	1659	1672	1703
25°	1633	1660	1701
30°	1603	1646	1700
35°	1571	1630	1701
40°	1535	1618	1711
45°	1498	1607	1726
50°	1454	1603	1752
55°	1417	1605	1787
60°	1362	1619	1848
65°	1300	1636	1916
70°	1231	1686	2022
75°	1098	1759	2209
80°	936	1863	2257
85°	667	1846	2160



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.7	3.1
10°-20°	342.2	8.9
20°-30°	516.8	13.5
30°-40°	622.9	16.2
40°-50°	653.9	17.1
50°-60°	611.8	16.0
60°-70°	505.2	13.2
70°-80°	344.3	9.0
80°-90°	117.4	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°	978.6	25.5
0°-40°	1601.5	41.8
0°-60°	2867.1	74.8
0°-90°	3834.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3834.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1264	1264	1264	1264	1264	
5°	1262	1261	1254	1262	1262	120
15°	1206	1207	1208	1221	1224	340
25°	1100	1105	1118	1140	1146	506
35°	957	967	992	1025	1036	598
45°	787	804	845	890	907	607
55°	604	628	684	740	762	539
65°	408	443	514	579	602	405
75°	211	260	338	402	425	225
85°	43	85	120	135	140	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1264.4	1264.4	1264.4	1264.4	1264.4
2.5°	1265.7	1264.4	1258.1	1264.4	1263.1
5°	1261.9	1260.6	1254.2	1261.9	1261.9
7.5°	1253.0	1253.0	1246.6	1255.5	1256.8
10°	1240.3	1240.3	1236.4	1246.6	1246.6
12.5°	1225.0	1225.0	1225.0	1235.2	1236.4
15°	1205.9	1207.2	1208.4	1221.2	1223.7
17.5°	1183.0	1185.6	1189.4	1204.6	1207.2
20°	1158.8	1161.4	1167.7	1185.6	1189.4
22.5°	1128.3	1134.7	1143.6	1163.9	1167.7
25°	1100.3	1105.4	1118.1	1139.8	1146.1
27.5°	1066.0	1073.6	1090.1	1113.0	1122.0
30°	1031.6	1039.3	1059.6	1086.3	1094.0
32.5°	994.7	1006.2	1027.8	1055.8	1064.7
35°	956.6	966.8	992.2	1025.3	1035.5
37.5°	914.6	928.6	956.6	992.2	1004.9
40°	873.9	889.2	921.0	959.1	974.4
42.5°	833.2	848.5	884.1	927.3	942.6
45°	787.4	803.9	844.6	890.4	907.0
47.5°	741.6	762.0	806.5	854.8	872.6
50°	694.5	717.4	765.8	816.7	837.0
52.5°	652.6	674.2	725.1	779.8	798.8
55°	604.2	628.4	684.4	740.3	762.0
57.5°	554.6	581.3	641.1	702.2	723.8
60°	506.3	535.5	601.7	662.7	686.9
62.5°	459.2	488.5	557.2	620.8	644.9
65°	408.3	442.7	513.9	578.8	601.7
67.5°	360.0	396.9	471.9	535.5	558.4
70°	312.9	348.5	428.7	491.0	513.9
72.5°	262.0	302.7	382.9	447.8	471.9
75°	211.2	259.5	338.4	402.0	424.9
77.5°	164.1	213.7	292.6	344.7	356.2
80°	120.8	171.7	240.4	277.3	291.3
82.5°	77.6	128.5	183.2	209.9	221.3
85°	43.2	85.2	119.6	134.8	139.9
87.5°	17.8	36.9	48.3	54.7	54.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)