

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: P310090

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-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: P310090  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
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-L82765-RDP-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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**

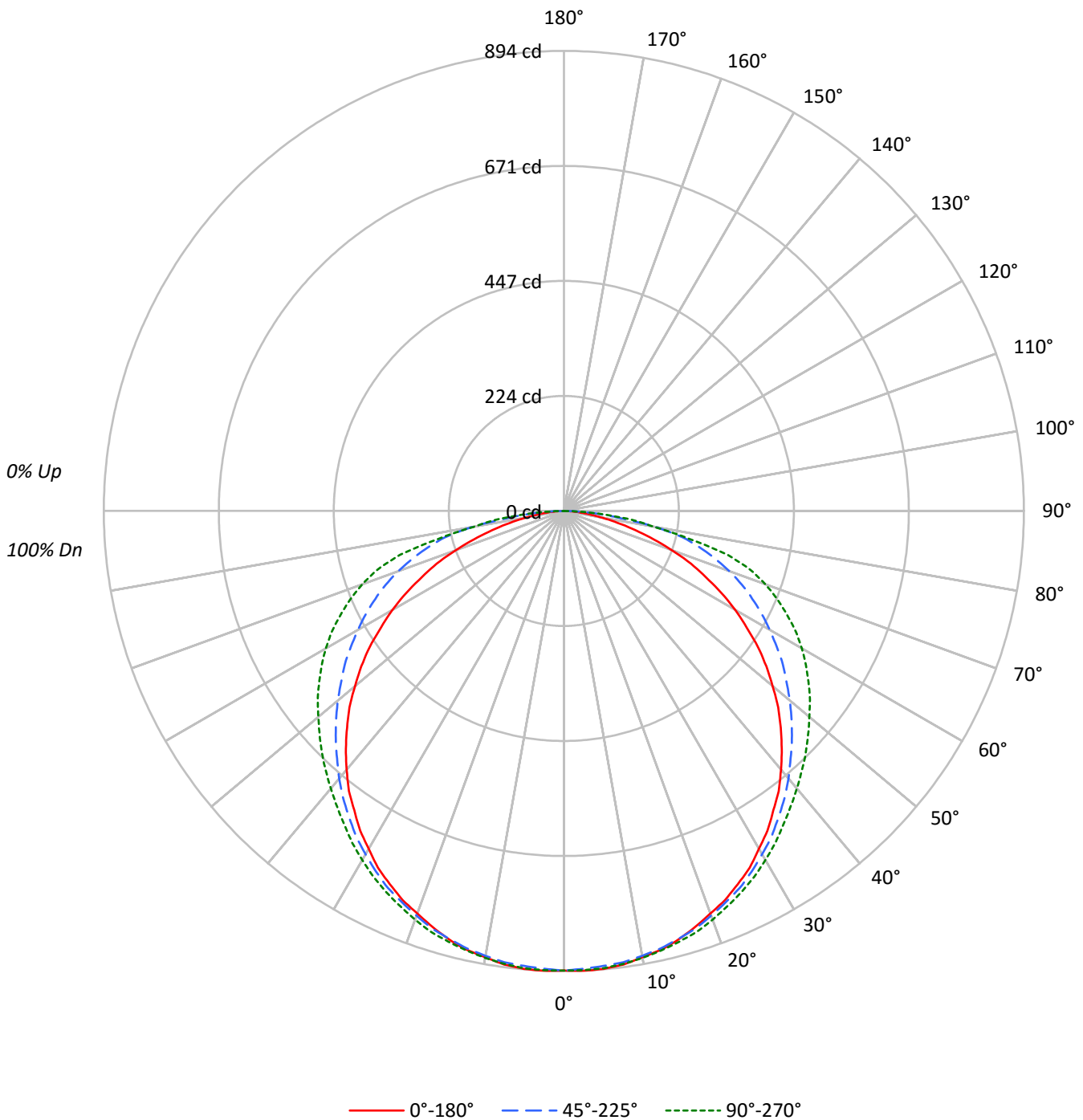
Lumens per Lamp: N/A  
Luminaire Lumens: 2840.0 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1202	1202	1202
5°	1206	1199	1204
10°	1203	1199	1205
15°	1201	1199	1207
20°	1192	1198	1210
25°	1188	1200	1213
30°	1178	1197	1217
35°	1166	1194	1222
40°	1153	1193	1237
45°	1134	1193	1265
50°	1109	1200	1303
55°	1080	1219	1361
60°	1035	1243	1437
65°	969	1287	1525
70°	881	1347	1640
75°	747	1421	1713
80°	590	1430	1386
85°	435	1087	1218



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.7	3.0
10°-20°	243.8	8.6
20°-30°	372.8	13.1
30°-40°	455.8	16.0
40°-50°	485.8	17.1
50°-60°	464.5	16.4
60°-70°	393.5	13.9
70°-80°	264.5	9.3
80°-90°	74.6	2.6
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°	701.4	24.7
0°-40°	1157.2	40.7
0°-60°	2107.5	74.2
0°-90°	2840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2840.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	893	893	893	893	893	
5°	893	892	888	892	892	85
15°	862	862	861	868	866	243
25°	800	803	809	816	817	369
35°	710	716	727	741	744	445
45°	596	606	627	654	665	460
55°	461	478	520	561	580	410
65°	304	335	404	458	479	302
75°	144	196	273	320	330	154
85°	28	58	70	76	79	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	893.1	893.1	893.1	893.1	893.1
2.5°	894.5	894.5	890.3	893.1	893.1
5°	893.1	891.7	887.5	891.7	891.7
7.5°	888.9	887.5	884.6	888.9	887.5
10°	880.4	880.4	877.6	881.8	881.8
12.5°	873.4	872.0	870.6	876.2	874.8
15°	862.1	862.1	860.7	867.7	866.3
17.5°	848.0	849.4	850.8	856.5	857.9
20°	832.5	835.3	836.8	845.2	845.2
22.5°	818.4	819.8	822.7	831.1	831.1
25°	800.1	802.9	808.6	815.6	817.0
27.5°	781.8	783.2	790.3	800.1	801.5
30°	757.9	762.1	770.5	781.8	783.2
32.5°	736.7	741.0	750.8	762.1	764.9
35°	710.0	715.6	726.9	741.0	743.8
37.5°	686.0	690.2	704.3	719.8	724.1
40°	656.4	664.9	679.0	697.3	704.3
42.5°	626.9	635.3	652.2	676.2	684.6
45°	595.9	605.7	626.9	653.6	664.9
47.5°	564.9	576.1	600.1	631.1	643.8
50°	529.7	543.7	573.3	608.5	622.6
52.5°	495.9	512.8	545.2	584.6	602.9
55°	460.6	477.5	519.8	560.7	580.4
57.5°	421.2	443.7	490.2	536.7	557.8
60°	384.6	405.7	462.0	512.8	533.9
62.5°	345.1	373.3	433.9	487.4	508.5
65°	304.3	335.3	404.3	457.8	478.9
67.5°	267.6	301.5	374.7	428.2	449.4
70°	224.0	266.2	342.3	395.8	417.0
72.5°	183.1	229.6	308.5	360.6	380.3
75°	143.7	195.8	273.3	319.8	329.6
77.5°	107.1	162.0	236.7	256.4	249.3
80°	76.1	129.6	184.5	174.7	178.9
82.5°	49.3	98.6	114.1	129.6	133.8
85°	28.2	57.8	70.4	76.1	78.9
87.5°	12.7	21.1	28.2	28.2	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)