

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: P309545

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-2700K**

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: P309545  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-2700K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 2700K 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**

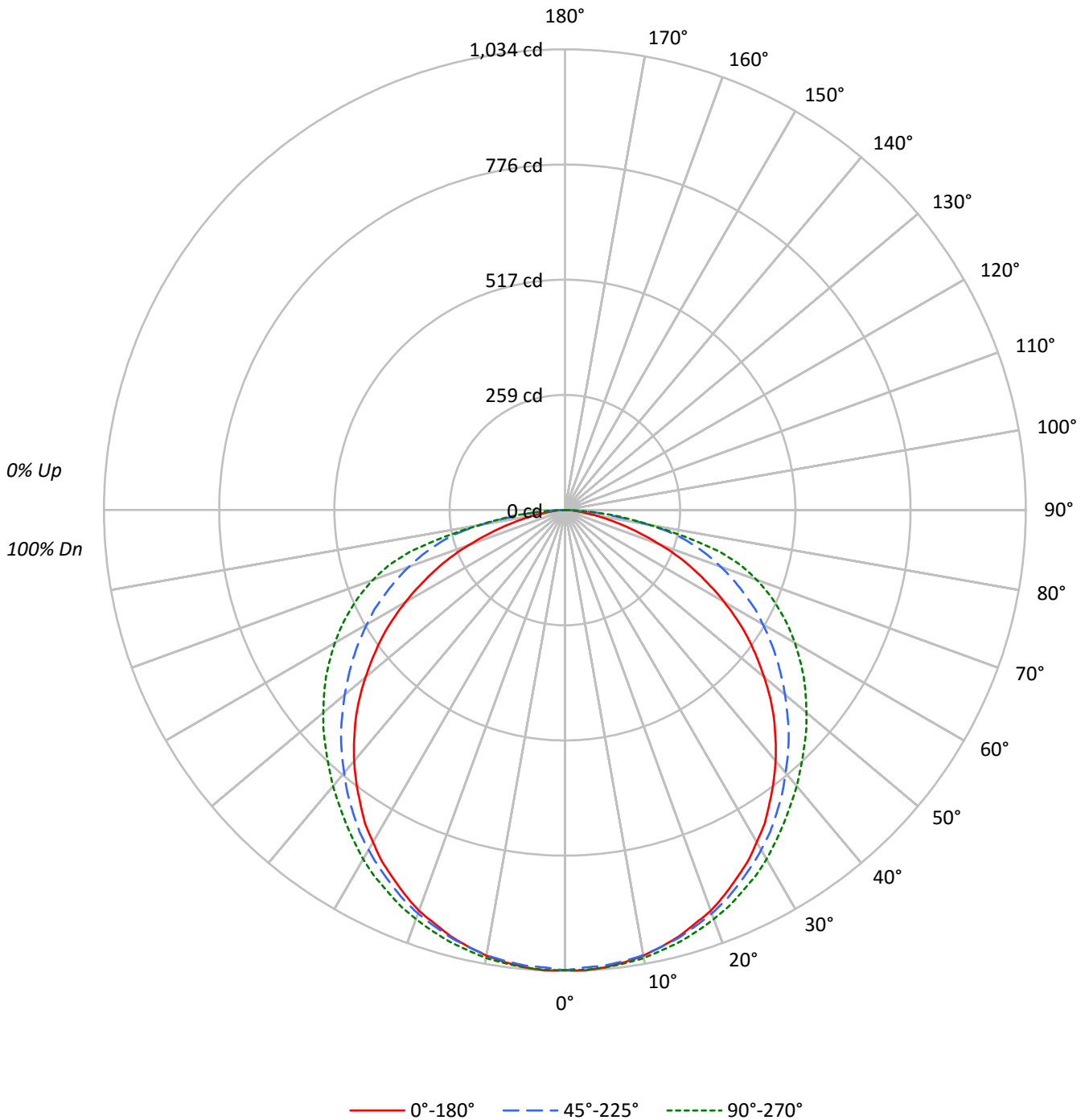
Lumens per Lamp: N/A  
Luminaire Lumens: 3183.0 lumens  
Efficiency: N/A  
Efficacy: 74.5 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

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

	0°	45°	90°
0°	1389	1389	1389
5°	1391	1386	1391
10°	1387	1386	1395
15°	1379	1383	1396
20°	1370	1379	1399
25°	1353	1373	1401
30°	1337	1368	1406
35°	1316	1361	1407
40°	1292	1353	1421
45°	1263	1351	1443
50°	1222	1350	1481
55°	1179	1360	1535
60°	1112	1380	1603
65°	1027	1413	1693
70°	897	1463	1803
75°	727	1538	1864
80°	537	1508	1508
85°	412	1112	1255



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.8	3.1
10°-20°	280.9	8.8
20°-30°	427.7	13.4
30°-40°	519.3	16.3
40°-50°	548.6	17.2
50°-60°	517.7	16.3
60°-70°	430.5	13.5
70°-80°	283.2	8.9
80°-90°	77.2	2.4
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°	806.5	25.3
0°-40°	1325.8	41.7
0°-60°	2392.1	75.2
0°-90°	3183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3183.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1033	1033	1033	1033	1033	
5°	1030	1030	1026	1030	1030	98
15°	990	991	993	1002	1002	279
25°	912	917	925	941	943	420
35°	801	810	829	850	857	501
45°	664	677	710	745	758	511
55°	502	524	580	634	654	447
65°	322	360	444	509	532	319
75°	140	204	296	350	358	151
85°	27	59	72	80	81	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1032.7	1032.7	1032.7	1032.7	1032.7
2.5°	1034.1	1032.7	1027.4	1032.7	1032.7
5°	1030.1	1030.1	1026.1	1030.1	1030.1
7.5°	1023.4	1023.4	1020.7	1026.1	1026.1
10°	1015.4	1015.4	1014.1	1020.7	1020.7
12.5°	1003.4	1004.7	1003.4	1011.4	1011.4
15°	990.1	991.4	992.8	1002.1	1002.1
17.5°	972.8	975.4	978.1	988.8	990.1
20°	956.8	958.1	963.4	975.4	976.8
22.5°	935.5	939.4	946.1	958.1	962.1
25°	911.5	916.8	924.8	940.8	943.4
27.5°	888.8	892.8	903.5	920.8	926.1
30°	860.8	867.5	880.8	898.1	904.8
32.5°	834.2	840.8	856.8	875.5	880.8
35°	800.9	810.2	828.8	850.2	856.8
37.5°	768.9	778.2	800.9	824.8	832.8
40°	735.6	746.2	770.2	798.2	808.9
42.5°	699.6	714.2	740.9	771.5	783.5
45°	663.6	676.9	710.2	744.9	758.2
47.5°	625.0	641.0	676.9	718.2	734.2
50°	583.7	603.6	645.0	690.3	707.6
52.5°	542.3	565.0	611.6	662.3	680.9
55°	502.4	523.7	579.7	634.3	654.3
57.5°	458.4	485.0	546.3	605.0	625.0
60°	413.1	442.4	513.0	574.3	595.7
62.5°	367.8	401.1	481.1	542.3	565.0
65°	322.5	359.8	443.7	509.0	531.7
67.5°	278.5	319.8	409.1	474.4	497.0
70°	227.9	279.8	371.8	435.7	458.4
72.5°	181.2	241.2	335.8	395.8	415.8
75°	139.9	203.9	295.8	350.5	358.5
77.5°	102.6	166.6	254.5	273.2	274.5
80°	69.3	133.3	194.6	191.9	194.6
82.5°	45.3	99.9	122.6	137.3	138.6
85°	26.7	58.6	72.0	80.0	81.3
87.5°	13.3	20.0	25.3	26.7	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)