

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: P313618

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-RDP-CA08-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: P313618  
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: 24FCZ2-50HE-UNV-L83050-RDP-CA08-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 3276.0 lumens  
Efficiency: N/A  
Efficacy: 81.3 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

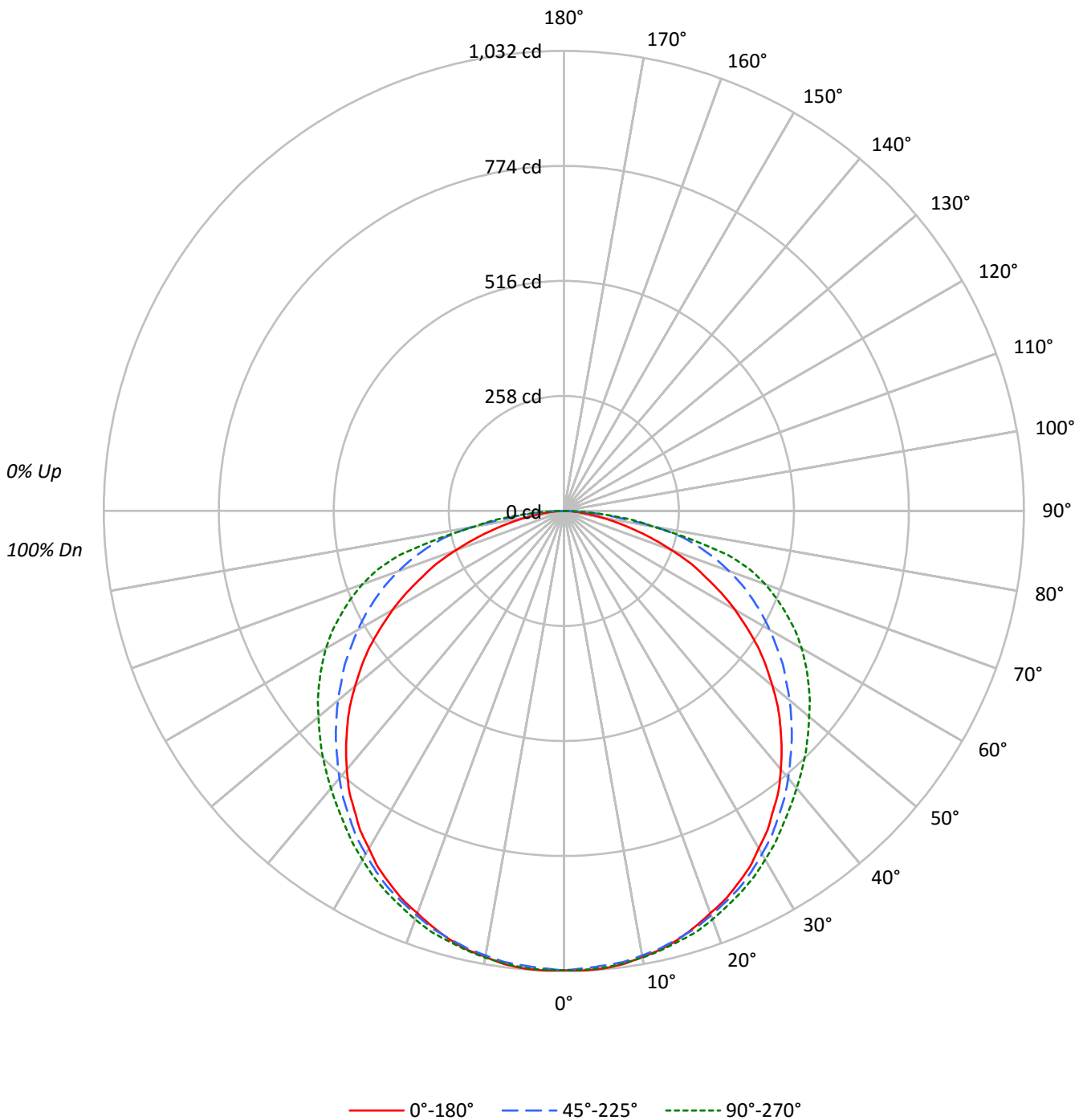
Input Watts (W): 40.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1386	1386	1386
5°	1391	1383	1389
10°	1388	1383	1390
15°	1385	1383	1392
20°	1375	1382	1396
25°	1370	1385	1399
30°	1358	1381	1404
35°	1345	1377	1409
40°	1330	1376	1427
45°	1308	1376	1459
50°	1279	1384	1503
55°	1247	1407	1571
60°	1194	1434	1657
65°	1117	1485	1759
70°	1017	1554	1892
75°	861	1639	1976
80°	680	1650	1599
85°	502	1254	1405



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.7	3.0
10°-20°	281.3	8.6
20°-30°	430.1	13.1
30°-40°	525.8	16.0
40°-50°	560.4	17.1
50°-60°	535.8	16.4
60°-70°	453.9	13.9
70°-80°	305.1	9.3
80°-90°	86.0	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°	809.1	24.7
0°-40°	1334.9	40.7
0°-60°	2431.0	74.2
0°-90°	3276.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3276.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1030	1029	1024	1029	1029	98
15°	994	994	993	1001	999	280
25°	923	926	933	941	942	425
35°	819	826	838	855	858	513
45°	687	699	723	754	767	530
55°	531	551	600	647	670	473
65°	351	387	466	528	552	348
75°	166	226	315	369	380	177
85°	32	67	81	88	91	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1030.2	1030.2	1030.2	1030.2	1030.2
2.5°	1031.8	1031.8	1027.0	1030.2	1030.2
5°	1030.2	1028.6	1023.7	1028.6	1028.6
7.5°	1025.3	1023.7	1020.5	1025.3	1023.7
10°	1015.6	1015.6	1012.3	1017.2	1017.2
12.5°	1007.5	1005.8	1004.2	1010.7	1009.1
15°	994.5	994.5	992.8	1001.0	999.3
17.5°	978.2	979.8	981.5	988.0	989.6
20°	960.3	963.6	965.2	975.0	975.0
22.5°	944.1	945.7	949.0	958.7	958.7
25°	923.0	926.2	932.7	940.8	942.5
27.5°	901.8	903.5	911.6	923.0	924.6
30°	874.2	879.1	888.8	901.8	903.5
32.5°	849.8	854.7	866.1	879.1	882.3
35°	819.0	825.5	838.5	854.7	858.0
37.5°	791.3	796.2	812.5	830.3	835.2
40°	757.2	767.0	783.2	804.3	812.5
42.5°	723.1	732.8	752.3	780.0	789.7
45°	687.3	698.7	723.1	754.0	767.0
47.5°	651.6	664.6	692.2	728.0	742.6
50°	611.0	627.2	661.3	702.0	718.2
52.5°	572.0	591.5	628.8	674.3	695.5
55°	531.4	550.9	599.6	646.7	669.5
57.5°	485.9	511.9	565.5	619.1	643.5
60°	443.6	468.0	533.0	591.5	615.9
62.5°	398.1	430.6	500.5	562.2	586.6
65°	351.0	386.7	466.4	528.1	552.5
67.5°	308.7	347.7	432.2	494.0	518.4
70°	258.4	307.1	394.9	456.6	481.0
72.5°	211.2	264.9	355.9	416.0	438.7
75°	165.7	225.9	315.2	368.9	380.2
77.5°	123.5	186.9	273.0	295.7	287.6
80°	87.7	149.5	212.9	201.5	206.4
82.5°	56.9	113.7	131.6	149.5	154.4
85°	32.5	66.6	81.2	87.7	91.0
87.5°	14.6	24.4	32.5	32.5	30.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)