

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: P309506

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CA08-W2A-U-5500K**

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: P309506  
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: 24FCZ2-50HE-UNV-L82765-HRP-CA08-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 5500K 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: 3625.0 lumens  
Efficiency: N/A  
Efficacy: 91.8 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

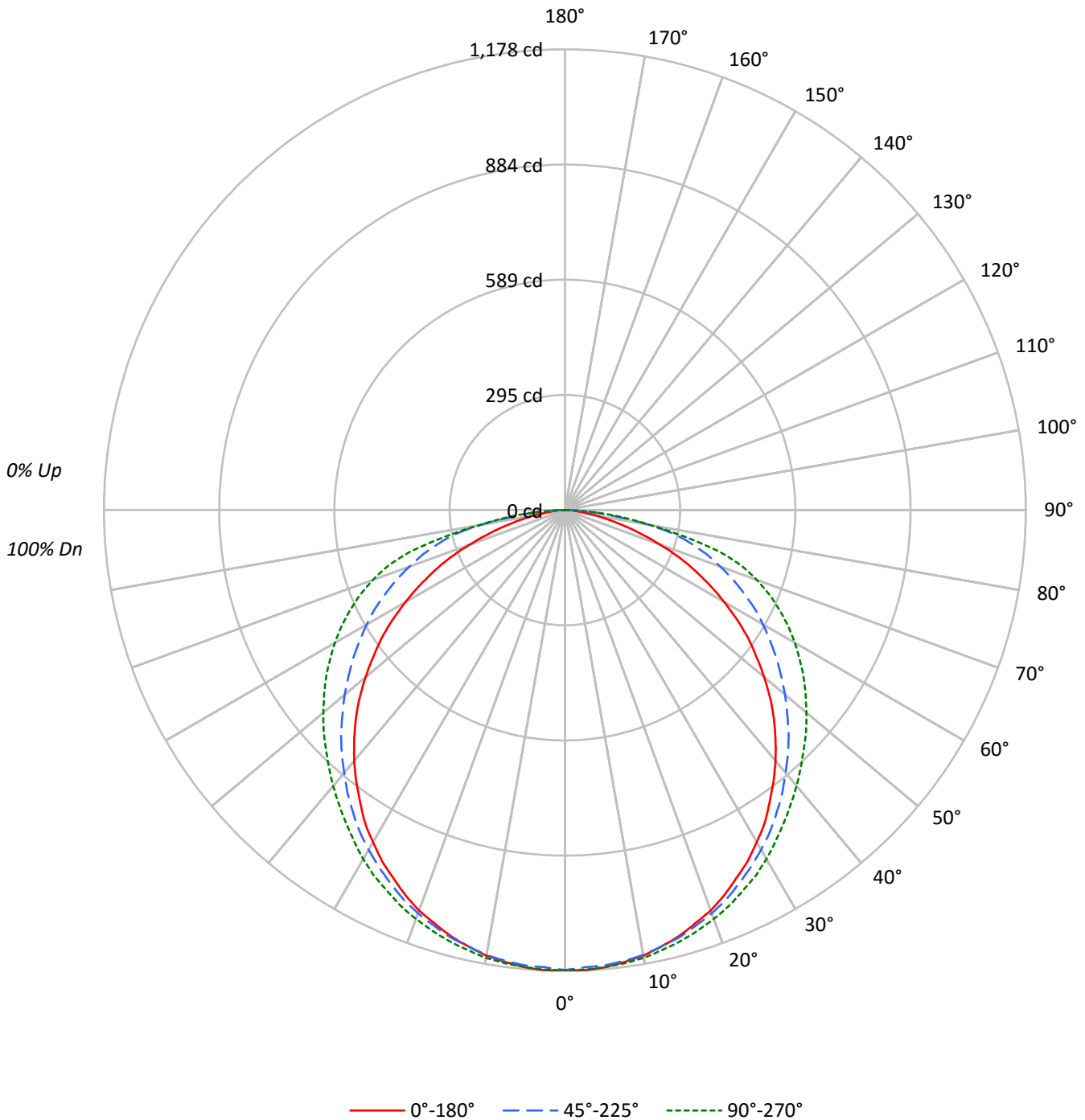
Input Watts (W): 39.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82				82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67				67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56				56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48				48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23				23

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

	0°	45°	90°
0°	1582	1582	1582
5°	1584	1578	1584
10°	1580	1578	1588
15°	1571	1575	1590
20°	1560	1571	1593
25°	1541	1564	1595
30°	1523	1558	1601
35°	1498	1550	1603
40°	1471	1541	1618
45°	1438	1539	1643
50°	1391	1537	1687
55°	1342	1549	1748
60°	1266	1572	1826
65°	1169	1609	1928
70°	1021	1666	2054
75°	828	1751	2122
80°	611	1717	1717
85°	469	1264	1430



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.4	3.1
10°-20°	319.9	8.8
20°-30°	487.1	13.4
30°-40°	591.4	16.3
40°-50°	624.8	17.2
50°-60°	589.6	16.3
60°-70°	490.2	13.5
70°-80°	322.5	8.9
80°-90°	87.9	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°	918.4	25.3
0°-40°	1509.9	41.7
0°-60°	2724.3	75.2
0°-90°	3625.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3625.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1176	1176	1176	1176	1176	
5°	1173	1173	1168	1173	1173	111
15°	1128	1129	1131	1141	1141	318
25°	1038	1044	1053	1071	1074	479
35°	912	923	944	968	976	571
45°	756	771	809	848	864	582
55°	572	596	660	722	745	510
65°	367	410	505	580	606	363
75°	159	232	337	399	408	172
85°	30	67	82	91	93	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1176.1	1176.1	1176.1	1176.1	1176.1
2.5°	1177.7	1176.1	1170.1	1176.1	1176.1
5°	1173.1	1173.1	1168.5	1173.1	1173.1
7.5°	1165.5	1165.5	1162.5	1168.5	1168.5
10°	1156.4	1156.4	1154.9	1162.5	1162.5
12.5°	1142.7	1144.3	1142.7	1151.9	1151.9
15°	1127.6	1129.1	1130.6	1141.2	1141.2
17.5°	1107.8	1110.9	1113.9	1126.1	1127.6
20°	1089.6	1091.1	1097.2	1110.9	1112.4
22.5°	1065.3	1069.9	1077.5	1091.1	1095.7
25°	1038.0	1044.1	1053.2	1071.4	1074.5
27.5°	1012.2	1016.8	1028.9	1048.7	1054.7
30°	980.4	988.0	1003.1	1022.9	1030.4
32.5°	950.0	957.6	975.8	997.1	1003.1
35°	912.1	922.7	943.9	968.2	975.8
37.5°	875.7	886.3	912.1	939.4	948.5
40°	837.7	849.9	877.2	909.0	921.2
42.5°	796.7	813.4	843.8	878.7	892.3
45°	755.8	770.9	808.9	848.3	863.5
47.5°	711.8	730.0	770.9	818.0	836.2
50°	664.7	687.5	734.5	786.1	805.8
52.5°	617.7	643.5	696.6	754.2	775.5
55°	572.1	596.4	660.2	722.4	745.1
57.5°	522.1	552.4	622.2	689.0	711.8
60°	470.5	503.8	584.3	654.1	678.4
62.5°	418.9	456.8	547.9	617.7	643.5
65°	367.3	409.7	505.4	579.7	605.5
67.5°	317.2	364.2	465.9	540.3	566.1
70°	259.5	318.7	423.4	496.3	522.1
72.5°	206.4	274.7	382.4	450.7	473.5
75°	159.3	232.2	336.9	399.1	408.2
77.5°	116.9	189.7	289.9	311.1	312.6
80°	78.9	151.8	221.6	218.5	221.6
82.5°	51.6	113.8	139.6	156.3	157.8
85°	30.4	66.8	81.9	91.1	92.6
87.5°	15.2	22.8	28.8	30.4	33.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)