

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: P309553

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-6500K**

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: P309553
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 6500K 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: 3626.0 lumens
Efficiency: N/A
Efficacy: 81.3 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

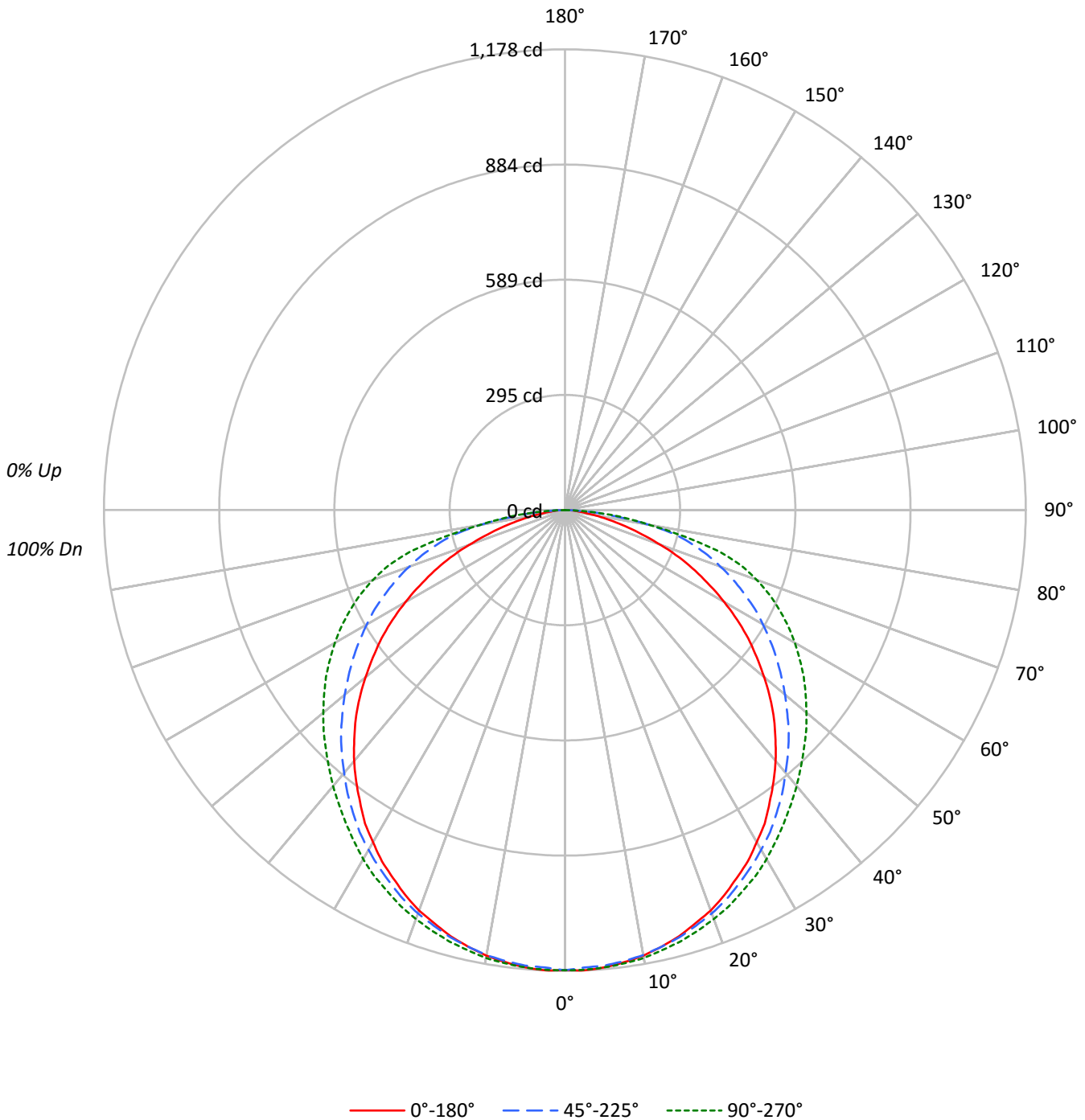
Input Watts (W): 44.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1583	1583	1583
5°	1585	1579	1585
10°	1580	1578	1589
15°	1571	1575	1590
20°	1561	1571	1593
25°	1541	1564	1596
30°	1523	1559	1601
35°	1498	1551	1603
40°	1472	1541	1618
45°	1439	1540	1643
50°	1392	1538	1687
55°	1342	1549	1748
60°	1266	1573	1826
65°	1170	1609	1928
70°	1021	1666	2054
75°	829	1752	2123
80°	611	1717	1717
85°	469	1266	1430



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.4	3.1
10°-20°	320.0	8.8
20°-30°	487.2	13.4
30°-40°	591.6	16.3
40°-50°	625.0	17.2
50°-60°	589.8	16.3
60°-70°	490.4	13.5
70°-80°	322.6	8.9
80°-90°	88.0	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°	918.7	25.3
0°-40°	1510.3	41.7
0°-60°	2725.1	75.2
0°-90°	3626.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3626.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1176	1176	1176	1176	1176	
5°	1173	1173	1169	1173	1173	111
15°	1128	1129	1131	1142	1142	318
25°	1038	1044	1054	1072	1075	479
35°	912	923	944	968	976	571
45°	756	771	809	849	864	582
55°	572	597	660	723	745	510
65°	367	410	506	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°	1176.5	1176.5	1176.5	1176.5	1176.5
2.5°	1178.0	1176.5	1170.4	1176.5	1176.5
5°	1173.4	1173.4	1168.9	1173.4	1173.4
7.5°	1165.8	1165.8	1162.8	1168.9	1168.9
10°	1156.7	1156.7	1155.2	1162.8	1162.8
12.5°	1143.1	1144.6	1143.1	1152.2	1152.2
15°	1127.9	1129.4	1130.9	1141.5	1141.5
17.5°	1108.1	1111.2	1114.2	1126.4	1127.9
20°	1089.9	1091.4	1097.5	1111.2	1112.7
22.5°	1065.6	1070.2	1077.8	1091.4	1096.0
25°	1038.3	1044.4	1053.5	1071.7	1074.8
27.5°	1012.5	1017.1	1029.2	1048.9	1055.0
30°	980.6	988.2	1003.4	1023.1	1030.7
32.5°	950.3	957.9	976.1	997.3	1003.4
35°	912.3	923.0	944.2	968.5	976.1
37.5°	875.9	886.5	912.3	939.6	948.8
40°	837.9	850.1	877.4	909.3	921.4
42.5°	797.0	813.7	844.0	878.9	892.6
45°	756.0	771.1	809.1	848.6	863.7
47.5°	711.9	730.2	771.1	818.2	836.4
50°	664.9	687.7	734.7	786.3	806.1
52.5°	617.8	643.6	696.8	754.5	775.7
55°	572.3	596.6	660.3	722.6	745.3
57.5°	522.2	552.6	622.4	689.2	711.9
60°	470.6	504.0	584.4	654.3	678.6
62.5°	419.0	456.9	548.0	617.8	643.6
65°	367.4	409.9	505.5	579.9	605.7
67.5°	317.3	364.3	466.0	540.4	566.2
70°	259.6	318.8	423.5	496.4	522.2
72.5°	206.4	274.8	382.5	450.8	473.6
75°	159.4	232.3	337.0	399.2	408.3
77.5°	116.9	189.8	289.9	311.2	312.7
80°	78.9	151.8	221.6	218.6	221.6
82.5°	51.6	113.9	139.7	156.4	157.9
85°	30.4	66.8	82.0	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)