

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: P313268

Luminaire Tested: **24FCZ2-50-UNV-L83050-HRP-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: P313268
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-L83050-HRP-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 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

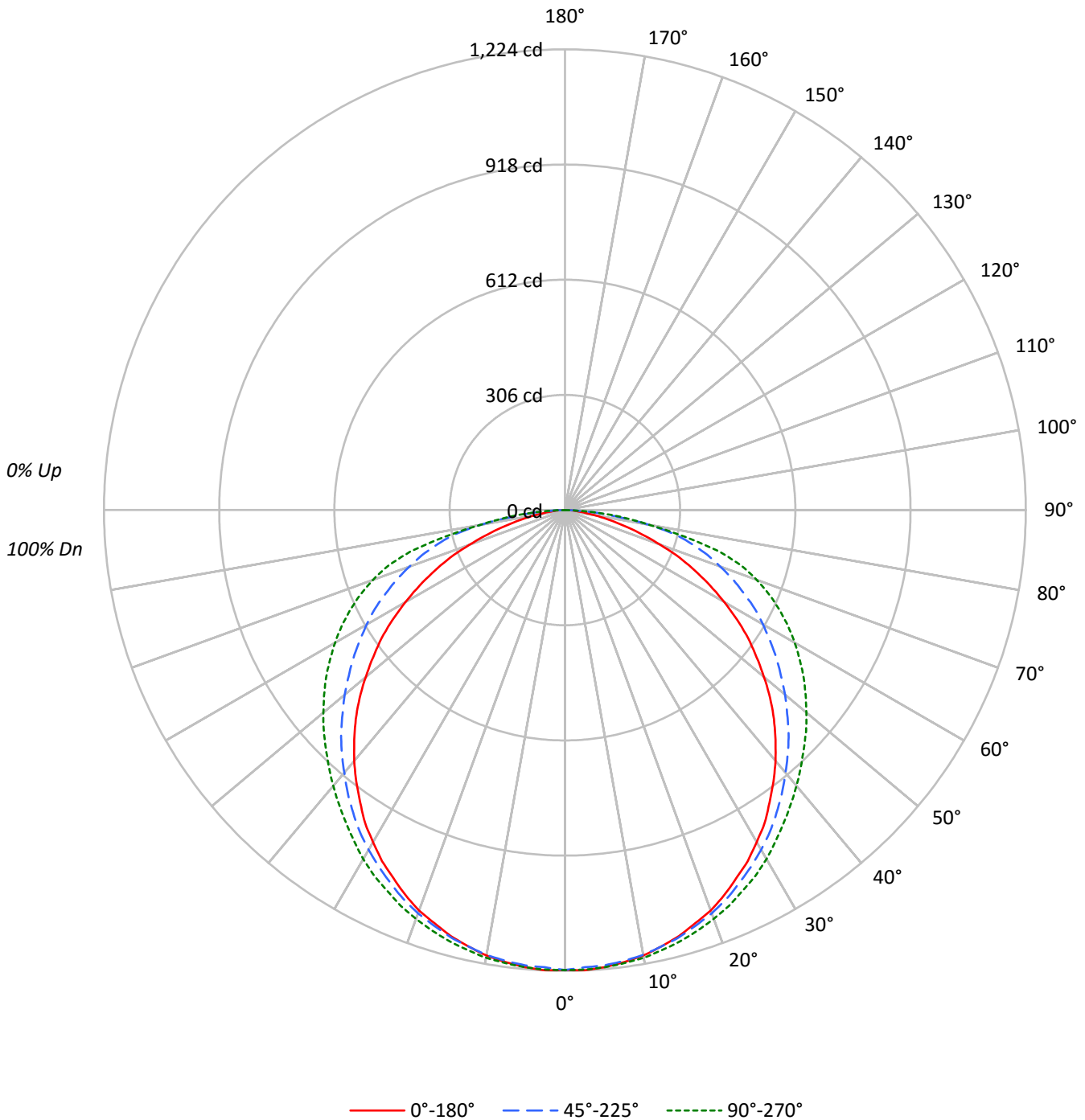
Lumens per Lamp: N/A
Luminaire Lumens: 3766.0 lumens
Efficiency: N/A
Efficacy: 84.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44.8
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	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°	1644	1644	1644
5°	1646	1640	1646
10°	1641	1639	1650
15°	1632	1636	1651
20°	1621	1632	1655
25°	1601	1624	1657
30°	1582	1619	1663
35°	1556	1611	1665
40°	1529	1601	1681
45°	1494	1599	1707
50°	1446	1597	1752
55°	1394	1609	1816
60°	1315	1633	1896
65°	1215	1671	2003
70°	1061	1731	2134
75°	860	1820	2205
80°	635	1784	1784
85°	486	1314	1485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.7	3.1
10°-20°	332.4	8.8
20°-30°	506.0	13.4
30°-40°	614.4	16.3
40°-50°	649.1	17.2
50°-60°	612.5	16.3
60°-70°	509.3	13.5
70°-80°	335.1	8.9
80°-90°	91.3	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°	954.2	25.3
0°-40°	1568.6	41.7
0°-60°	2830.3	75.2
0°-90°	3766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3766.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1222	1222	1222	1222	1222	
5°	1219	1219	1214	1219	1219	116
15°	1171	1173	1175	1186	1186	330
25°	1078	1085	1094	1113	1116	497
35°	948	959	981	1006	1014	593
45°	785	801	840	881	897	605
55°	594	620	686	750	774	529
65°	382	426	525	602	629	377
75°	166	241	350	415	424	178
85°	32	69	85	95	96	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1221.9	1221.9	1221.9	1221.9	1221.9
2.5°	1223.5	1221.9	1215.6	1221.9	1221.9
5°	1218.7	1218.7	1214.0	1218.7	1218.7
7.5°	1210.8	1210.8	1207.7	1214.0	1214.0
10°	1201.4	1201.4	1199.8	1207.7	1207.7
12.5°	1187.2	1188.8	1187.2	1196.7	1196.7
15°	1171.4	1173.0	1174.6	1185.6	1185.6
17.5°	1150.9	1154.1	1157.2	1169.9	1171.4
20°	1132.0	1133.6	1139.9	1154.1	1155.7
22.5°	1106.8	1111.5	1119.4	1133.6	1138.3
25°	1078.4	1084.7	1094.2	1113.1	1116.2
27.5°	1051.6	1056.3	1068.9	1089.4	1095.8
30°	1018.5	1026.4	1042.1	1062.6	1070.5
32.5°	987.0	994.8	1013.8	1035.8	1042.1
35°	947.5	958.6	980.7	1005.9	1013.8
37.5°	909.7	920.7	947.5	975.9	985.4
40°	870.3	882.9	911.3	944.4	957.0
42.5°	827.7	845.1	876.6	912.9	927.1
45°	785.2	800.9	840.3	881.3	897.1
47.5°	739.4	758.4	800.9	849.8	868.7
50°	690.6	714.2	763.1	816.7	837.2
52.5°	641.7	668.5	723.7	783.6	805.7
55°	594.4	619.6	685.8	750.5	774.1
57.5°	542.4	573.9	646.4	715.8	739.4
60°	488.8	523.4	607.0	679.5	704.7
62.5°	435.1	474.6	569.2	641.7	668.5
65°	381.5	425.7	525.0	602.3	629.1
67.5°	329.5	378.4	484.0	561.3	588.1
70°	269.6	331.1	439.9	515.6	542.4
72.5°	214.4	285.4	397.3	468.3	491.9
75°	165.5	241.2	350.0	414.7	424.1
77.5°	121.4	197.1	301.1	323.2	324.8
80°	82.0	157.7	230.2	227.0	230.2
82.5°	53.6	118.2	145.0	162.4	164.0
85°	31.5	69.4	85.1	94.6	96.2
87.5°	15.8	23.6	30.0	31.5	34.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)