

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: P313265

Luminaire Tested: **24FCZ2-50-UNV-L83050-HRP-CA08-W2A-U-3000K**

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: P313265
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-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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

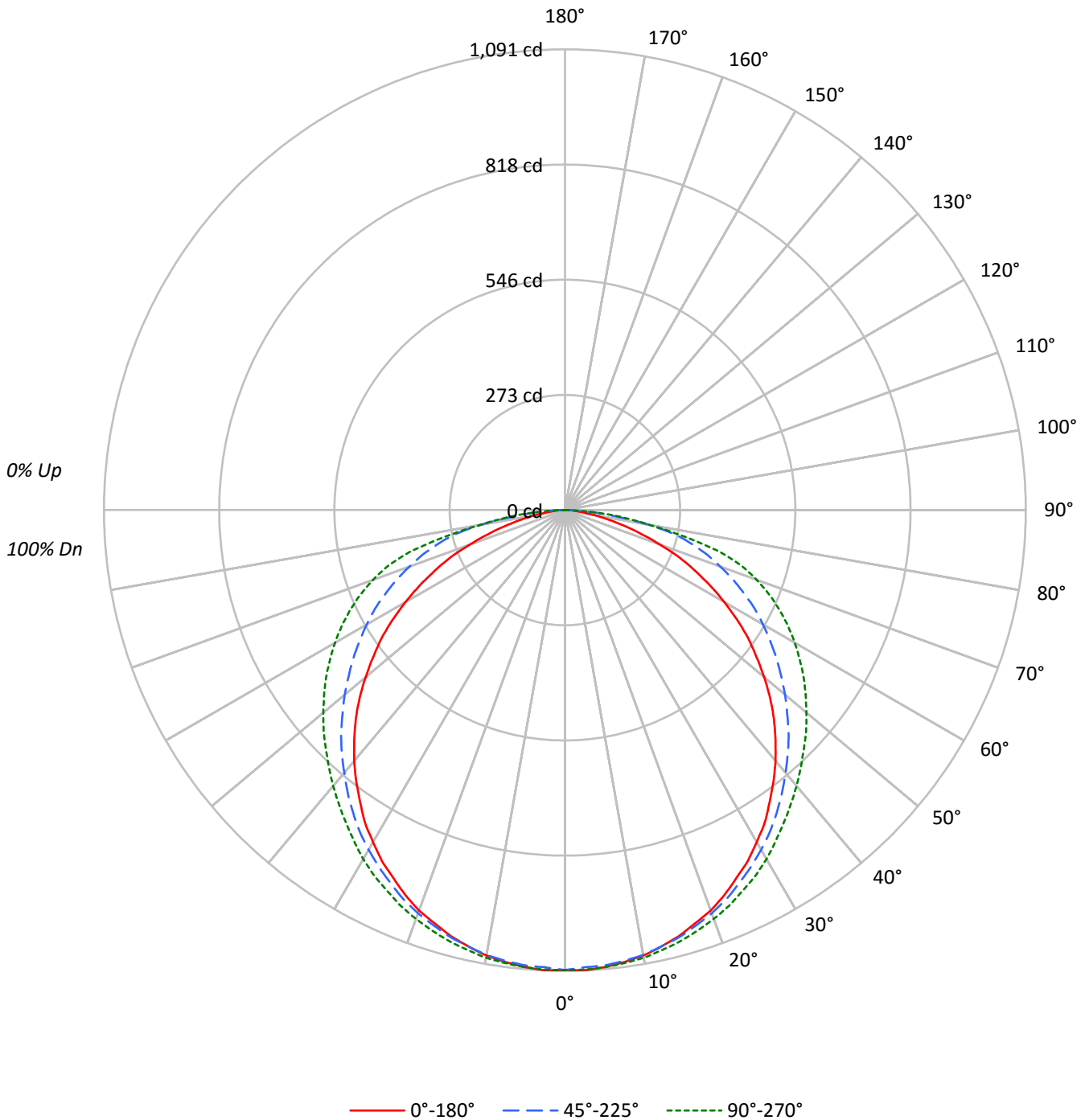
Lumens per Lamp: N/A
Luminaire Lumens: 3357.0 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 42.6
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°	1466	1466	1466
5°	1467	1462	1467
10°	1463	1461	1471
15°	1455	1458	1472
20°	1445	1455	1475
25°	1427	1448	1477
30°	1411	1443	1483
35°	1387	1436	1484
40°	1363	1427	1498
45°	1332	1425	1522
50°	1289	1424	1562
55°	1243	1434	1619
60°	1172	1456	1690
65°	1083	1490	1785
70°	945	1543	1902
75°	767	1622	1966
80°	566	1590	1590
85°	434	1172	1323



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.2	3.1
10°-20°	296.3	8.8
20°-30°	451.1	13.4
30°-40°	547.7	16.3
40°-50°	578.6	17.2
50°-60°	546.0	16.3
60°-70°	454.0	13.5
70°-80°	298.7	8.9
80°-90°	81.4	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°	850.5	25.3
0°-40°	1398.2	41.7
0°-60°	2522.9	75.2
0°-90°	3357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3357.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1089	1089	1089	1089	1089	
5°	1086	1086	1082	1086	1086	103
15°	1044	1046	1047	1057	1057	294
25°	961	967	975	992	995	443
35°	845	854	874	897	904	529
45°	700	714	749	786	800	539
55°	530	552	611	669	690	472
65°	340	380	468	537	561	336
75°	148	215	312	370	378	159
85°	28	62	76	84	86	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1089.2	1089.2	1089.2	1089.2	1089.2
2.5°	1090.6	1089.2	1083.6	1089.2	1089.2
5°	1086.4	1086.4	1082.2	1086.4	1086.4
7.5°	1079.3	1079.3	1076.5	1082.2	1082.2
10°	1070.9	1070.9	1069.5	1076.5	1076.5
12.5°	1058.3	1059.7	1058.3	1066.7	1066.7
15°	1044.2	1045.6	1047.0	1056.9	1056.9
17.5°	1025.9	1028.7	1031.6	1042.8	1044.2
20°	1009.1	1010.5	1016.1	1028.7	1030.2
22.5°	986.6	990.8	997.8	1010.5	1014.7
25°	961.3	966.9	975.3	992.2	995.0
27.5°	937.4	941.6	952.9	971.1	976.7
30°	907.9	914.9	929.0	947.2	954.3
32.5°	879.8	886.8	903.7	923.3	929.0
35°	844.6	854.5	874.2	896.6	903.7
37.5°	810.9	820.8	844.6	869.9	878.4
40°	775.8	787.0	812.3	841.8	853.1
42.5°	737.8	753.3	781.4	813.7	826.4
45°	699.9	713.9	749.1	785.6	799.7
47.5°	659.1	676.0	713.9	757.5	774.4
50°	615.6	636.6	680.2	728.0	746.3
52.5°	572.0	595.9	645.1	698.5	718.2
55°	529.8	552.3	611.3	669.0	690.0
57.5°	483.5	511.6	576.2	638.0	659.1
60°	435.7	466.6	541.1	605.7	628.2
62.5°	387.9	423.0	507.3	572.0	595.9
65°	340.1	379.5	468.0	536.9	560.8
67.5°	293.7	337.3	431.5	500.3	524.2
70°	240.3	295.1	392.1	459.6	483.5
72.5°	191.1	254.4	354.2	417.4	438.5
75°	147.6	215.0	312.0	369.6	378.1
77.5°	108.2	175.7	268.4	288.1	289.5
80°	73.1	140.5	205.2	202.4	205.2
82.5°	47.8	105.4	129.3	144.8	146.2
85°	28.1	61.8	75.9	84.3	85.7
87.5°	14.1	21.1	26.7	28.1	30.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)