

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: P313261

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-HRP-CP250-W2A-U-3500K**

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: P313261  
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-L83050-HRP-CP250-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"  
POLYCARB SHEET  
Light Source: (336) 3500K 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: 3313.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 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

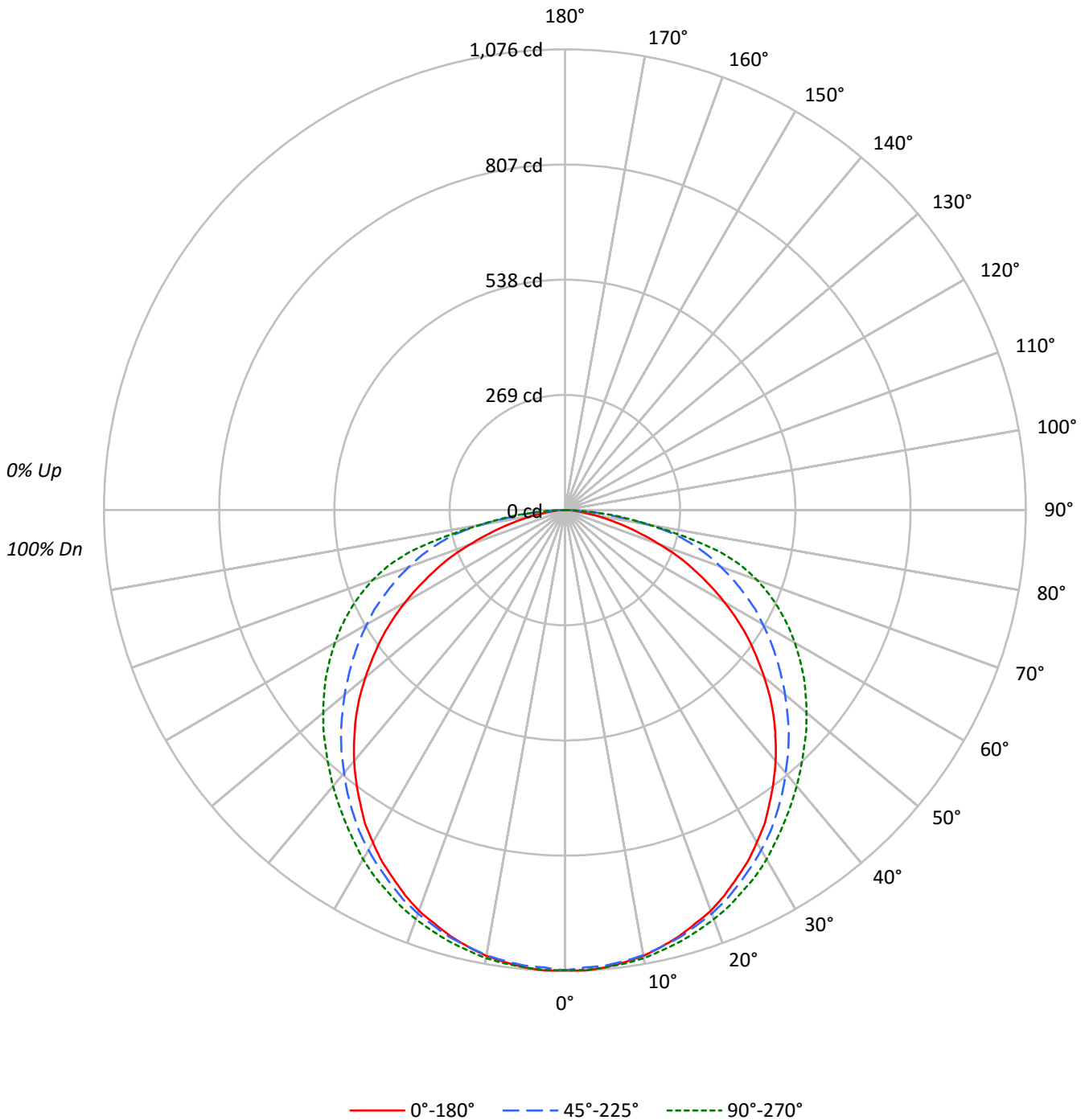
Input Watts (W): 38.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1446	1446	1446
5°	1448	1442	1448
10°	1444	1442	1451
15°	1435	1439	1453
20°	1426	1436	1456
25°	1408	1429	1458
30°	1392	1424	1463
35°	1369	1417	1465
40°	1345	1408	1479
45°	1314	1407	1502
50°	1272	1405	1542
55°	1227	1415	1597
60°	1157	1437	1668
65°	1068	1471	1762
70°	933	1522	1877
75°	757	1601	1940
80°	559	1569	1569
85°	428	1156	1306



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.8	3.1
10°-20°	292.4	8.8
20°-30°	445.2	13.4
30°-40°	540.5	16.3
40°-50°	571.1	17.2
50°-60°	538.9	16.3
60°-70°	448.1	13.5
70°-80°	294.8	8.9
80°-90°	80.3	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°	839.4	25.3
0°-40°	1379.9	41.7
0°-60°	2489.9	75.2
0°-90°	3313.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3313.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1075	1075	1075	1075	1075	
5°	1072	1072	1068	1072	1072	102
15°	1030	1032	1033	1043	1043	291
25°	949	954	963	979	982	438
35°	834	843	863	885	892	522
45°	691	705	739	775	789	532
55°	523	545	603	660	681	466
65°	336	374	462	530	553	332
75°	146	212	308	365	373	157
85°	28	61	75	83	85	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1074.9	1074.9	1074.9	1074.9	1074.9
2.5°	1076.3	1074.9	1069.4	1074.9	1074.9
5°	1072.1	1072.1	1068.0	1072.1	1072.1
7.5°	1065.2	1065.2	1062.4	1068.0	1068.0
10°	1056.9	1056.9	1055.5	1062.4	1062.4
12.5°	1044.4	1045.8	1044.4	1052.7	1052.7
15°	1030.5	1031.9	1033.3	1043.0	1043.0
17.5°	1012.5	1015.3	1018.0	1029.1	1030.5
20°	995.8	997.2	1002.8	1015.3	1016.7
22.5°	973.7	977.8	984.8	997.2	1001.4
25°	948.7	954.2	962.6	979.2	982.0
27.5°	925.1	929.3	940.4	958.4	963.9
30°	896.0	902.9	916.8	934.8	941.8
32.5°	868.2	875.2	891.8	911.2	916.8
35°	833.6	843.3	862.7	884.9	891.8
37.5°	800.3	810.0	833.6	858.5	866.9
40°	765.6	776.7	801.7	830.8	841.9
42.5°	728.2	743.4	771.2	803.1	815.5
45°	690.7	704.6	739.3	775.3	789.2
47.5°	650.5	667.1	704.6	747.6	764.2
50°	607.5	628.3	671.3	718.5	736.5
52.5°	564.5	588.1	636.6	689.3	708.7
55°	522.9	545.1	603.3	660.2	681.0
57.5°	477.1	504.9	568.7	629.7	650.5
60°	430.0	460.5	534.0	597.8	620.0
62.5°	382.8	417.5	500.7	564.5	588.1
65°	335.6	374.5	461.9	529.8	553.4
67.5°	289.9	332.9	425.8	493.8	517.3
70°	237.2	291.3	387.0	453.5	477.1
72.5°	188.6	251.0	349.5	411.9	432.7
75°	145.6	212.2	307.9	364.8	373.1
77.5°	106.8	173.4	264.9	284.3	285.7
80°	72.1	138.7	202.5	199.7	202.5
82.5°	47.2	104.0	127.6	142.9	144.2
85°	27.7	61.0	74.9	83.2	84.6
87.5°	13.9	20.8	26.4	27.7	30.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)