

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: P309501

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-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: P309501
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-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 3291.0 lumens
Efficiency: N/A
Efficacy: 86.4 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

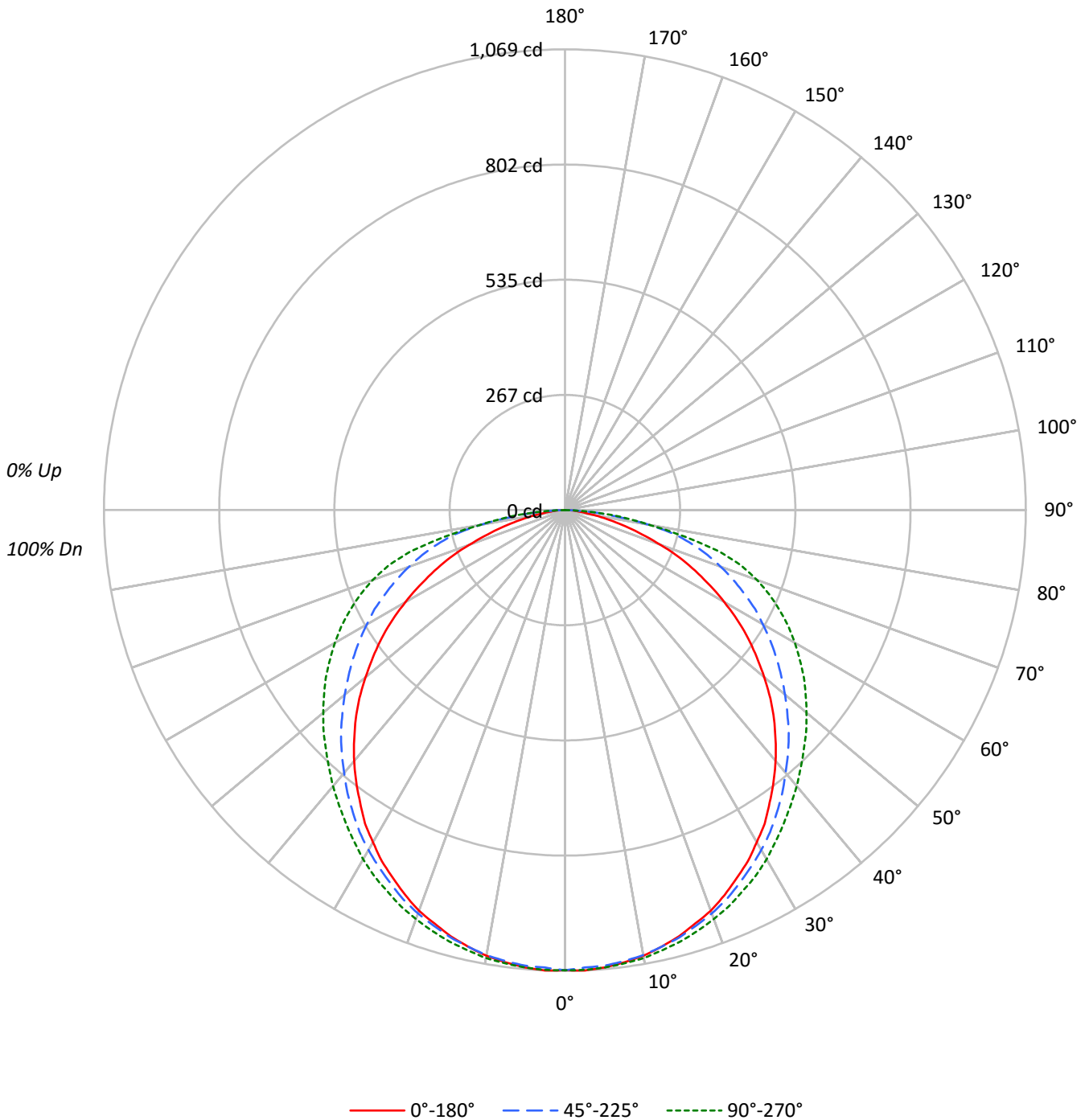
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1437	1437	1437
5°	1438	1433	1438
10°	1434	1433	1442
15°	1426	1430	1443
20°	1416	1426	1446
25°	1399	1420	1448
30°	1383	1415	1453
35°	1360	1408	1455
40°	1336	1399	1469
45°	1306	1397	1492
50°	1263	1396	1531
55°	1218	1406	1587
60°	1149	1427	1657
65°	1061	1461	1750
70°	927	1512	1865
75°	752	1590	1927
80°	555	1559	1559
85°	426	1149	1297



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	3.1
10°-20°	290.5	8.8
20°-30°	442.2	13.4
30°-40°	536.9	16.3
40°-50°	567.3	17.2
50°-60°	535.3	16.3
60°-70°	445.1	13.5
70°-80°	292.8	8.9
80°-90°	79.8	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°	833.8	25.3
0°-40°	1370.8	41.7
0°-60°	2473.3	75.2
0°-90°	3291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3291.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1065	1065	1061	1065	1065	101
15°	1024	1025	1026	1036	1036	289
25°	942	948	956	973	976	435
35°	828	838	857	879	886	518
45°	686	700	734	770	784	528
55°	519	542	599	656	676	463
65°	333	372	459	526	550	330
75°	145	211	306	362	371	156
85°	28	61	74	83	84	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1069.1	1067.8	1062.3	1067.8	1067.8
5°	1065.0	1065.0	1060.9	1065.0	1065.0
7.5°	1058.1	1058.1	1055.4	1060.9	1060.9
10°	1049.9	1049.9	1048.5	1055.4	1055.4
12.5°	1037.5	1038.8	1037.5	1045.7	1045.7
15°	1023.7	1025.1	1026.4	1036.1	1036.1
17.5°	1005.8	1008.5	1011.3	1022.3	1023.7
20°	989.2	990.6	996.1	1008.5	1009.9
22.5°	967.2	971.3	978.2	990.6	994.7
25°	942.4	947.9	956.2	972.7	975.5
27.5°	919.0	923.1	934.1	952.0	957.5
30°	890.0	896.9	910.7	928.6	935.5
32.5°	862.5	869.4	885.9	905.2	910.7
35°	828.0	837.7	857.0	879.0	885.9
37.5°	795.0	804.6	828.0	852.8	861.1
40°	760.5	771.5	796.3	825.3	836.3
42.5°	723.3	738.5	766.0	797.7	810.1
45°	686.1	699.9	734.3	770.2	783.9
47.5°	646.2	662.7	699.9	742.6	759.1
50°	603.5	624.1	666.8	713.7	731.6
52.5°	560.8	584.2	632.4	684.7	704.0
55°	519.4	541.5	599.3	655.8	676.5
57.5°	474.0	501.5	564.9	625.5	646.2
60°	427.1	457.4	530.4	593.8	615.9
62.5°	380.3	414.7	497.4	560.8	584.2
65°	333.4	372.0	458.8	526.3	549.7
67.5°	288.0	330.7	423.0	490.5	513.9
70°	235.6	289.3	384.4	450.5	474.0
72.5°	187.4	249.4	347.2	409.2	429.9
75°	144.7	210.8	305.9	362.4	370.6
77.5°	106.1	172.2	263.2	282.4	283.8
80°	71.6	137.8	201.2	198.4	201.2
82.5°	46.8	103.3	126.8	141.9	143.3
85°	27.6	60.6	74.4	82.7	84.0
87.5°	13.8	20.7	26.2	27.6	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)