

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: P309544

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CP250-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: P309544
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-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 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: 3382.0 lumens
Efficiency: N/A
Efficacy: 84.3 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

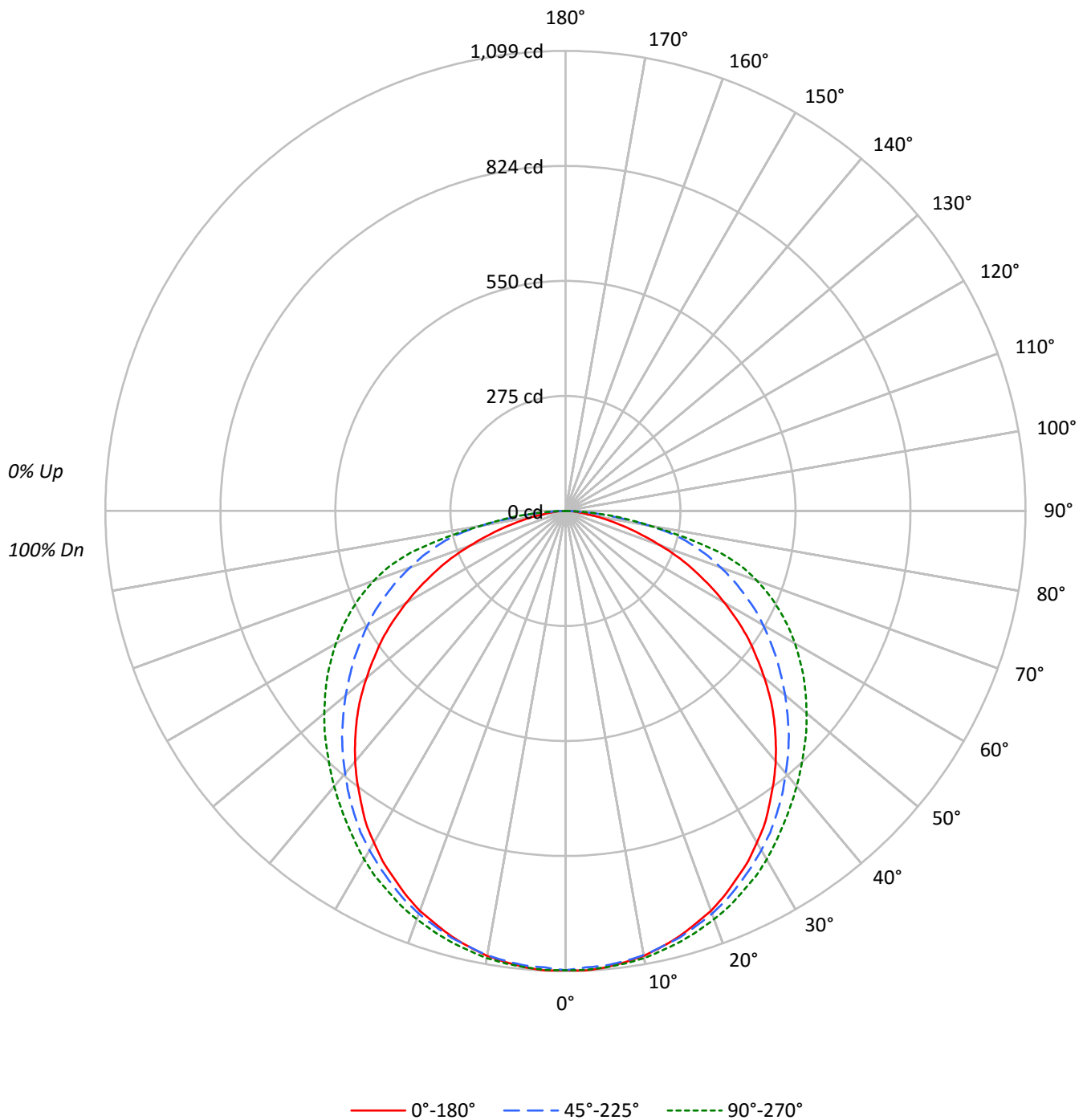
Input Watts (W): 40.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1476	1476	1476
5°	1478	1472	1478
10°	1474	1472	1482
15°	1465	1469	1483
20°	1456	1466	1486
25°	1438	1459	1488
30°	1421	1454	1494
35°	1398	1447	1495
40°	1373	1437	1509
45°	1342	1436	1533
50°	1298	1434	1574
55°	1252	1445	1631
60°	1181	1467	1703
65°	1091	1501	1798
70°	952	1554	1916
75°	773	1634	1980
80°	570	1602	1602
85°	437	1181	1334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.9	3.1
10°-20°	298.5	8.8
20°-30°	454.4	13.4
30°-40°	551.8	16.3
40°-50°	583.0	17.2
50°-60°	550.1	16.3
60°-70°	457.4	13.5
70°-80°	300.9	8.9
80°-90°	82.0	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°	856.9	25.3
0°-40°	1408.7	41.7
0°-60°	2541.7	75.2
0°-90°	3382.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3382.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1097	1097	1097	1097	1097	
5°	1094	1094	1090	1094	1094	104
15°	1052	1053	1055	1065	1065	297
25°	968	974	983	1000	1002	447
35°	851	861	881	903	910	533
45°	705	719	755	792	806	543
55°	534	556	616	674	695	475
65°	343	382	472	541	565	339
75°	149	217	314	372	381	160
85°	28	62	76	85	86	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1097.3	1097.3	1097.3	1097.3	1097.3
2.5°	1098.7	1097.3	1091.6	1097.3	1097.3
5°	1094.5	1094.5	1090.2	1094.5	1094.5
7.5°	1087.4	1087.4	1084.5	1090.2	1090.2
10°	1078.9	1078.9	1077.5	1084.5	1084.5
12.5°	1066.1	1067.6	1066.1	1074.6	1074.6
15°	1052.0	1053.4	1054.8	1064.7	1064.7
17.5°	1033.6	1036.4	1039.2	1050.6	1052.0
20°	1016.6	1018.0	1023.7	1036.4	1037.8
22.5°	993.9	998.2	1005.3	1018.0	1022.3
25°	968.4	974.1	982.6	999.6	1002.4
27.5°	944.4	948.6	960.0	978.4	984.0
30°	914.6	921.7	935.9	954.3	961.4
32.5°	886.3	893.4	910.4	930.2	935.9
35°	850.9	860.8	880.7	903.3	910.4
37.5°	817.0	826.9	850.9	876.4	884.9
40°	781.6	792.9	818.4	848.1	859.4
42.5°	743.3	758.9	787.2	819.8	832.5
45°	705.1	719.3	754.7	791.5	805.6
47.5°	664.0	681.0	719.3	763.1	780.1
50°	620.1	641.4	685.3	733.4	751.8
52.5°	576.3	600.3	649.9	703.7	723.5
55°	533.8	556.4	615.9	673.9	695.2
57.5°	487.1	515.4	580.5	642.8	664.0
60°	438.9	470.1	545.1	610.2	632.9
62.5°	390.8	426.2	511.1	576.3	600.3
65°	342.6	382.3	471.5	540.9	564.9
67.5°	295.9	339.8	434.7	504.0	528.1
70°	242.1	297.3	395.0	463.0	487.1
72.5°	192.6	256.3	356.8	420.5	441.7
75°	148.7	216.6	314.3	372.4	380.9
77.5°	109.0	177.0	270.4	290.3	291.7
80°	73.6	141.6	206.7	203.9	206.7
82.5°	48.1	106.2	130.3	145.8	147.2
85°	28.3	62.3	76.5	85.0	86.4
87.5°	14.2	21.2	26.9	28.3	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)