

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: P309584

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP250-W2A-U-4000K**

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: P309584
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-L82765-HRP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4000K 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: 3214.0 lumens
Efficiency: N/A
Efficacy: 74.4 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

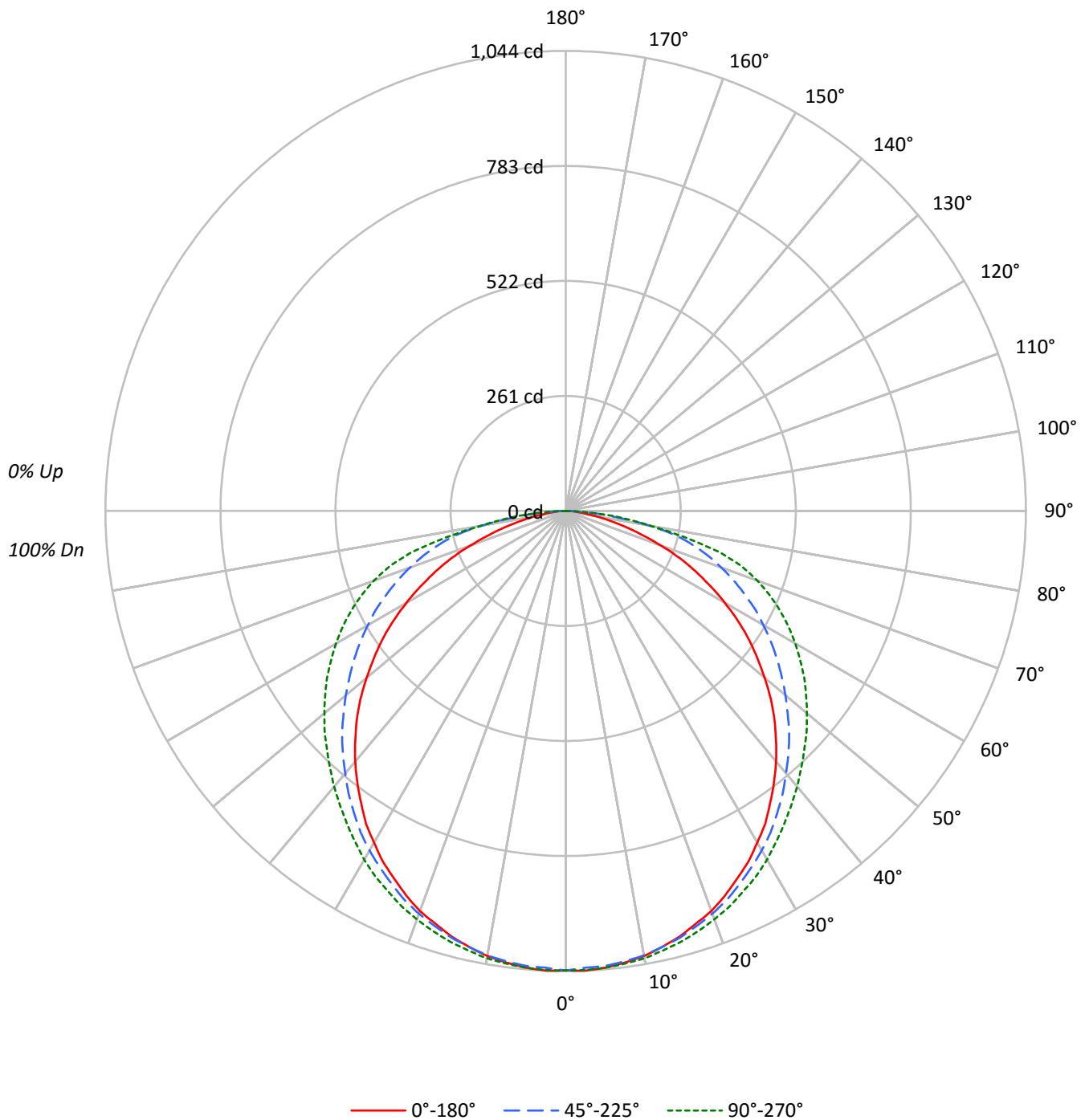
Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1403	1403	1403
5°	1405	1399	1405
10°	1401	1399	1408
15°	1393	1396	1409
20°	1383	1393	1412
25°	1366	1386	1414
30°	1350	1382	1419
35°	1328	1375	1421
40°	1304	1366	1434
45°	1275	1365	1457
50°	1234	1363	1496
55°	1190	1373	1550
60°	1122	1394	1619
65°	1037	1427	1709
70°	905	1477	1821
75°	735	1553	1881
80°	542	1522	1522
85°	415	1122	1267



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	3.1
10°-20°	283.7	8.8
20°-30°	431.9	13.4
30°-40°	524.4	16.3
40°-50°	554.0	17.2
50°-60°	522.8	16.3
60°-70°	434.7	13.5
70°-80°	286.0	8.9
80°-90°	78.0	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°	814.3	25.3
0°-40°	1338.7	41.7
0°-60°	2415.4	75.2
0°-90°	3214.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3214.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1043	1043	1043	1043	1043	
5°	1040	1040	1036	1040	1040	99
15°	1000	1001	1002	1012	1012	282
25°	920	926	934	950	953	425
35°	809	818	837	858	865	506
45°	670	684	717	752	766	516
55°	507	529	585	640	661	452
65°	326	363	448	514	537	322
75°	141	206	299	354	362	152
85°	27	59	73	81	82	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1042.8	1042.8	1042.8	1042.8	1042.8
2.5°	1044.1	1042.8	1037.4	1042.8	1042.8
5°	1040.1	1040.1	1036.1	1040.1	1040.1
7.5°	1033.4	1033.4	1030.7	1036.1	1036.1
10°	1025.3	1025.3	1023.9	1030.7	1030.7
12.5°	1013.2	1014.5	1013.2	1021.3	1021.3
15°	999.7	1001.1	1002.4	1011.8	1011.8
17.5°	982.2	984.9	987.6	998.4	999.7
20°	966.1	967.4	972.8	984.9	986.3
22.5°	944.6	948.6	955.3	967.4	971.5
25°	920.3	925.7	933.8	949.9	952.6
27.5°	897.5	901.5	912.3	929.8	935.1
30°	869.2	875.9	889.4	906.9	913.6
32.5°	842.3	849.0	865.2	884.0	889.4
35°	808.7	818.1	836.9	858.4	865.2
37.5°	776.4	785.8	808.7	832.9	841.0
40°	742.7	753.5	777.7	806.0	816.7
42.5°	706.4	721.2	748.1	779.1	791.2
45°	670.1	683.5	717.2	752.2	765.6
47.5°	631.1	647.2	683.5	725.2	741.4
50°	589.3	609.5	651.2	697.0	714.5
52.5°	547.6	570.5	617.6	668.7	687.6
55°	507.3	528.8	585.3	640.5	660.7
57.5°	462.9	489.8	551.7	610.9	631.1
60°	417.1	446.7	518.0	579.9	601.5
62.5°	371.4	405.0	485.7	547.6	570.5
65°	325.6	363.3	448.1	514.0	536.9
67.5°	281.2	322.9	413.1	479.0	501.9
70°	230.1	282.6	375.4	440.0	462.9
72.5°	183.0	243.5	339.1	399.6	419.8
75°	141.3	205.9	298.7	353.9	361.9
77.5°	103.6	168.2	257.0	275.8	277.2
80°	70.0	134.6	196.4	193.8	196.4
82.5°	45.7	100.9	123.8	138.6	139.9
85°	26.9	59.2	72.7	80.7	82.1
87.5°	13.5	20.2	25.6	26.9	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)