

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: P309496

Luminaire Tested: **24FCZ2-45-UNV-L82765-HRP-CP250-W2A-U-5000K**

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: P309496
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: 24FCZ2-45-UNV-L82765-HRP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 5000K 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: 3003.0 lumens
Efficiency: N/A
Efficacy: 78.0 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

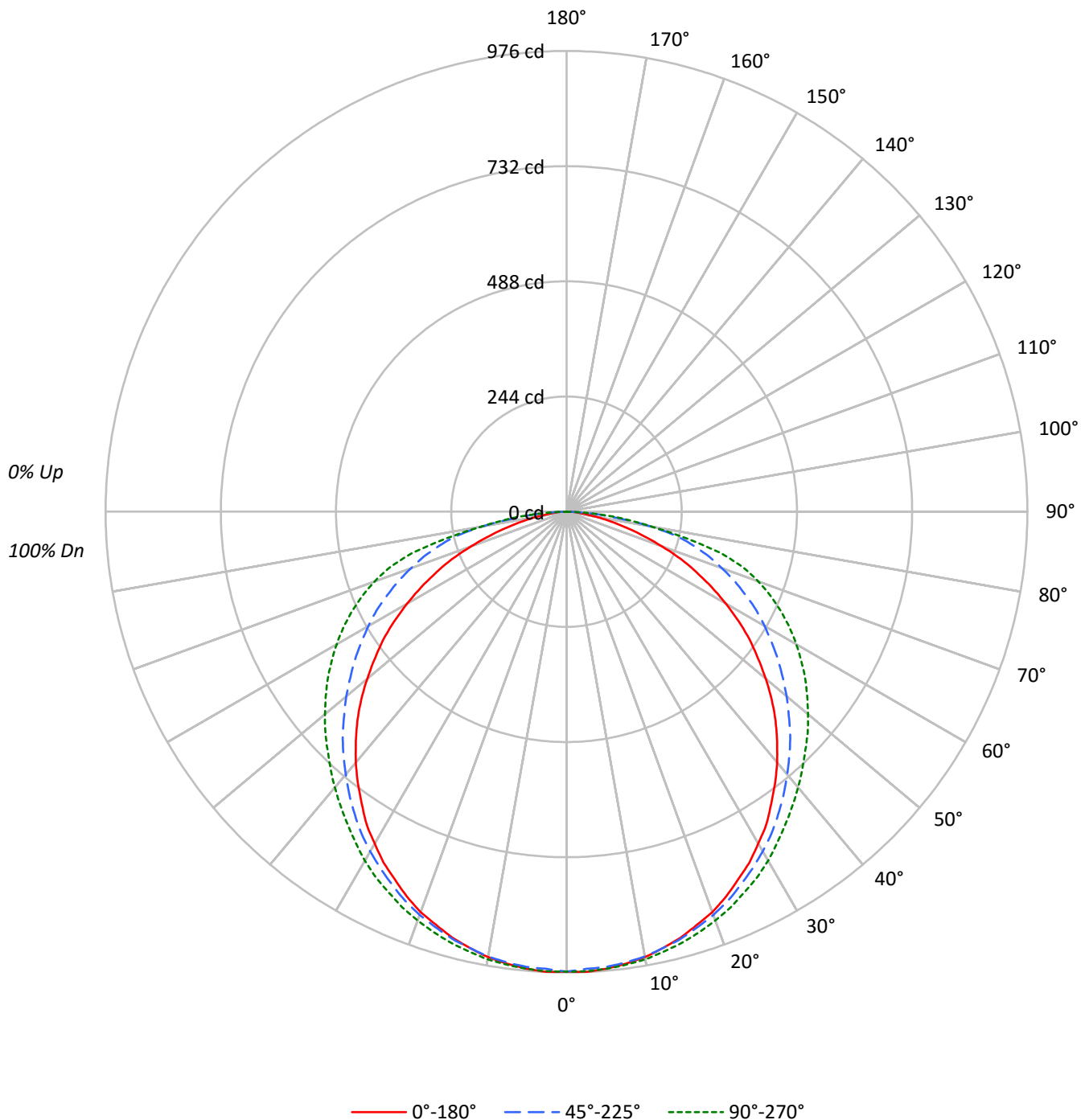
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1311	1311	1311
5°	1313	1307	1313
10°	1309	1307	1316
15°	1301	1305	1317
20°	1293	1302	1319
25°	1277	1295	1321
30°	1262	1291	1326
35°	1241	1284	1328
40°	1219	1276	1340
45°	1191	1275	1361
50°	1153	1274	1397
55°	1112	1283	1448
60°	1049	1302	1512
65°	968	1333	1597
70°	846	1380	1701
75°	686	1451	1758
80°	507	1423	1423
85°	387	1048	1184



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.3	3.1
10°-20°	265.1	8.8
20°-30°	403.5	13.4
30°-40°	490.0	16.3
40°-50°	517.6	17.2
50°-60°	488.4	16.3
60°-70°	406.1	13.5
70°-80°	267.2	8.9
80°-90°	72.8	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°	760.8	25.3
0°-40°	1250.8	41.7
0°-60°	2256.9	75.2
0°-90°	3003.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	974	974	974	974	974	
5°	972	972	968	972	972	92
15°	934	935	937	945	945	263
25°	860	865	872	888	890	397
35°	756	764	782	802	808	473
45°	626	639	670	703	715	482
55°	474	494	547	598	617	422
65°	304	339	419	480	502	301
75°	132	192	279	331	338	142
85°	25	55	68	75	77	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	974.3	974.3	974.3	974.3	974.3
2.5°	975.6	974.3	969.3	974.3	974.3
5°	971.8	971.8	968.0	971.8	971.8
7.5°	965.5	965.5	963.0	968.0	968.0
10°	958.0	958.0	956.7	963.0	963.0
12.5°	946.7	947.9	946.7	954.2	954.2
15°	934.1	935.4	936.6	945.4	945.4
17.5°	917.8	920.3	922.8	932.8	934.1
20°	902.7	903.9	909.0	920.3	921.5
22.5°	882.6	886.3	892.6	903.9	907.7
25°	859.9	864.9	872.5	887.6	890.1
27.5°	838.5	842.3	852.4	868.7	873.8
30°	812.1	818.4	831.0	847.3	853.6
32.5°	787.0	793.3	808.4	826.0	831.0
35°	755.6	764.4	782.0	802.1	808.4
37.5°	725.4	734.2	755.6	778.2	785.7
40°	694.0	704.0	726.7	753.1	763.1
42.5°	660.0	673.9	699.0	727.9	739.2
45°	626.1	638.7	670.1	702.8	715.3
47.5°	589.6	604.7	638.7	677.6	692.7
50°	550.7	569.5	608.5	651.2	667.6
52.5°	511.7	533.1	577.1	624.8	642.4
55°	474.0	494.1	546.9	598.4	617.3
57.5°	432.5	457.6	515.4	570.8	589.6
60°	389.7	417.4	484.0	541.9	562.0
62.5°	347.0	378.4	453.8	511.7	533.1
65°	304.2	339.4	418.6	480.2	501.6
67.5°	262.8	301.7	386.0	447.6	468.9
70°	215.0	264.0	350.8	411.1	432.5
72.5°	171.0	227.6	316.8	373.4	392.2
75°	132.0	192.4	279.1	330.6	338.2
77.5°	96.8	157.1	240.1	257.7	259.0
80°	65.4	125.7	183.6	181.0	183.6
82.5°	42.7	94.3	115.7	129.5	130.7
85°	25.1	55.3	67.9	75.4	76.7
87.5°	12.6	18.9	23.9	25.1	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)