

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: P309499

Luminaire Tested: **24FCZ2-45-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: P309499
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 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: 3049.0 lumens
Efficiency: N/A
Efficacy: 77.6 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

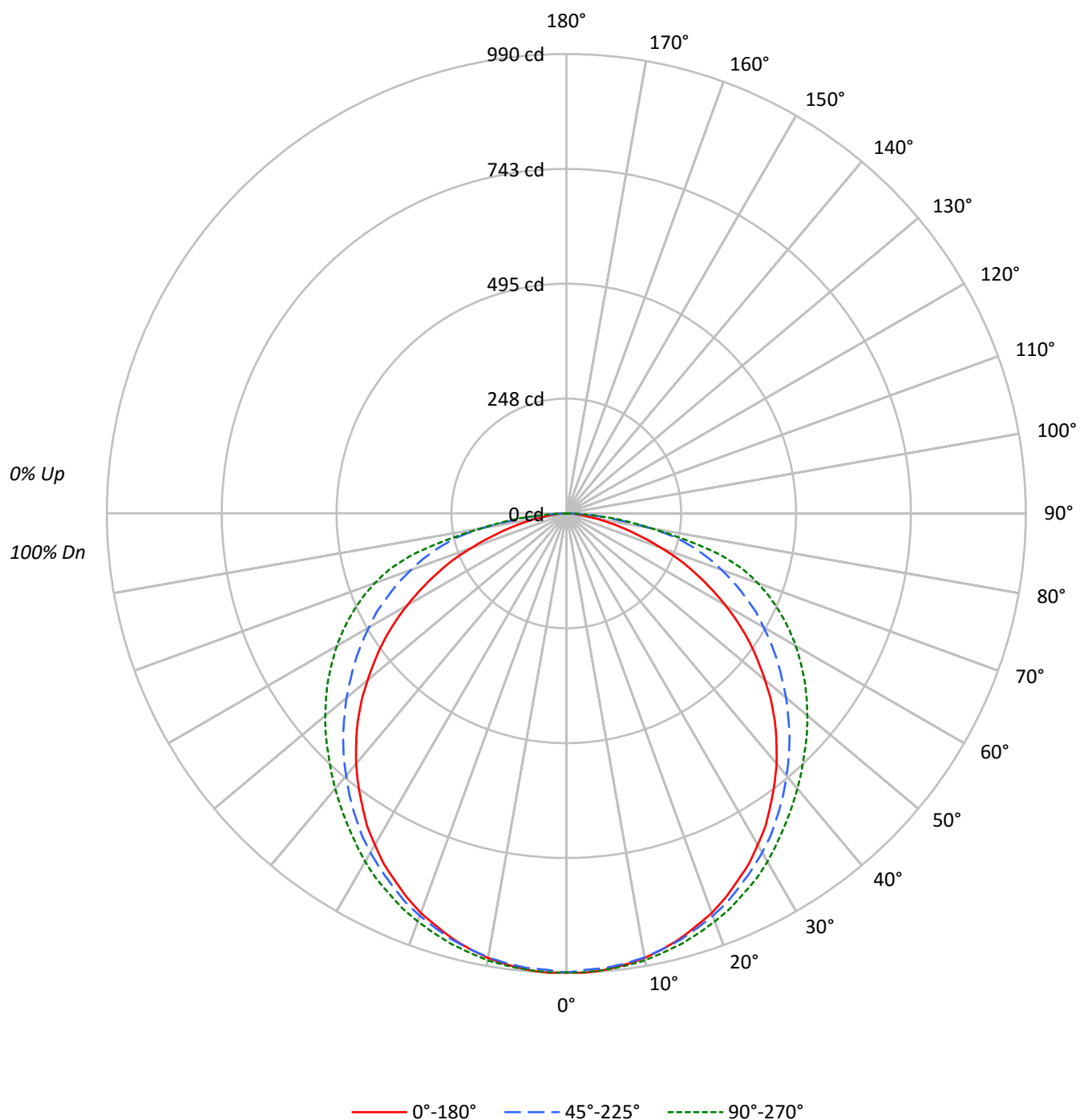
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1331	1331	1331
5°	1333	1328	1333
10°	1329	1327	1336
15°	1321	1325	1337
20°	1312	1321	1340
25°	1296	1315	1342
30°	1281	1311	1347
35°	1260	1304	1348
40°	1238	1296	1361
45°	1210	1294	1382
50°	1170	1293	1419
55°	1129	1303	1470
60°	1065	1322	1535
65°	983	1353	1621
70°	859	1401	1727
75°	697	1473	1785
80°	514	1444	1444
85°	394	1064	1203



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.7	3.1
10°-20°	269.1	8.8
20°-30°	409.7	13.4
30°-40°	497.5	16.3
40°-50°	525.6	17.2
50°-60°	495.9	16.3
60°-70°	412.3	13.5
70°-80°	271.3	8.9
80°-90°	73.9	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°	772.5	25.3
0°-40°	1270.0	41.7
0°-60°	2291.4	75.2
0°-90°	3049.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3049.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	989	989	989	989	989	
5°	987	987	983	987	987	94
15°	948	950	951	960	960	267
25°	873	878	886	901	904	403
35°	767	776	794	814	821	480
45°	636	648	680	714	726	490
55°	481	502	555	608	627	429
65°	309	345	425	488	509	305
75°	134	195	283	336	343	144
85°	26	56	69	77	78	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	989.3	989.3	989.3	989.3	989.3
2.5°	990.5	989.3	984.1	989.3	989.3
5°	986.7	986.7	982.9	986.7	986.7
7.5°	980.3	980.3	977.8	982.9	982.9
10°	972.7	972.7	971.4	977.8	977.8
12.5°	961.2	962.4	961.2	968.8	968.8
15°	948.4	949.7	951.0	959.9	959.9
17.5°	931.8	934.4	936.9	947.1	948.4
20°	916.5	917.8	922.9	934.4	935.6
22.5°	896.1	899.9	906.3	917.8	921.6
25°	873.1	878.2	885.9	901.2	903.7
27.5°	851.4	855.2	865.4	882.0	887.1
30°	824.6	831.0	843.7	860.3	866.7
32.5°	799.1	805.4	820.8	838.6	843.7
35°	767.1	776.1	794.0	814.4	820.8
37.5°	736.5	745.4	767.1	790.1	797.8
40°	704.6	714.8	737.8	764.6	774.8
42.5°	670.1	684.2	709.7	739.1	750.6
45°	635.7	648.4	680.3	713.5	726.3
47.5°	598.7	614.0	648.4	688.0	703.3
50°	559.1	578.2	617.8	661.2	677.8
52.5°	519.5	541.2	585.9	634.4	652.3
55°	481.2	501.6	555.3	607.6	626.7
57.5°	439.1	464.6	523.3	579.5	598.7
60°	395.7	423.8	491.4	550.2	570.6
62.5°	352.3	384.2	460.8	519.5	541.2
65°	308.9	344.6	425.1	487.6	509.3
67.5°	266.8	306.3	391.9	454.4	476.1
70°	218.3	268.1	356.1	417.4	439.1
72.5°	173.6	231.0	321.7	379.1	398.3
75°	134.0	195.3	283.4	335.7	343.4
77.5°	98.3	159.6	243.8	261.7	262.9
80°	66.4	127.6	186.4	183.8	186.4
82.5°	43.4	95.7	117.4	131.5	132.8
85°	25.5	56.2	68.9	76.6	77.9
87.5°	12.8	19.1	24.3	25.5	28.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)