

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: P313710

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-RDP-CP250-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: P313710
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-60HE-UNV-L83050-RDP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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: 3253.0 lumens
Efficiency: N/A
Efficacy: 68.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

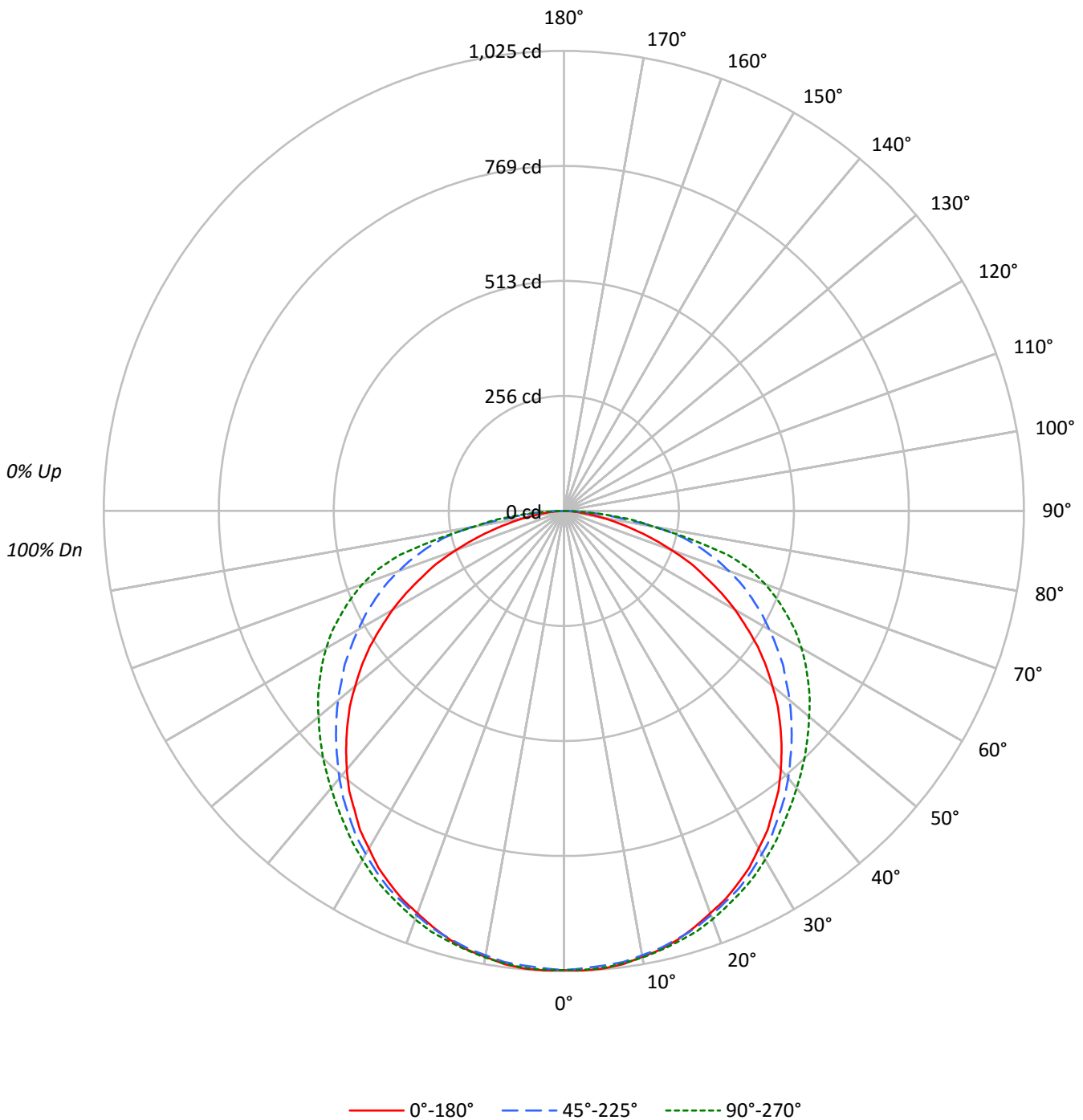
Input Watts (W): 47.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1376	1376	1376
5°	1382	1373	1380
10°	1378	1373	1380
15°	1376	1373	1382
20°	1365	1372	1386
25°	1361	1375	1389
30°	1349	1371	1394
35°	1336	1368	1399
40°	1321	1366	1417
45°	1299	1366	1449
50°	1270	1375	1493
55°	1238	1397	1559
60°	1185	1424	1646
65°	1110	1474	1747
70°	1009	1543	1879
75°	856	1627	1963
80°	675	1638	1588
85°	499	1246	1396



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.0	3.0
10°-20°	279.3	8.6
20°-30°	427.1	13.1
30°-40°	522.1	16.0
40°-50°	556.4	17.1
50°-60°	532.0	16.4
60°-70°	450.7	13.9
70°-80°	302.9	9.3
80°-90°	85.4	2.6
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°	803.4	24.7
0°-40°	1325.5	40.7
0°-60°	2414.0	74.2
0°-90°	3253.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3253.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1023	1021	1016	1021	1021	97
15°	988	988	986	994	992	278
25°	916	920	926	934	936	422
35°	813	820	833	849	852	509
45°	682	694	718	749	762	526
55°	528	547	595	642	665	470
65°	348	384	463	524	549	346
75°	165	224	313	366	378	176
85°	32	66	81	87	90	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1023.0	1023.0	1023.0	1023.0	1023.0
2.5°	1024.6	1024.6	1019.7	1023.0	1023.0
5°	1023.0	1021.4	1016.5	1021.4	1021.4
7.5°	1018.1	1016.5	1013.3	1018.1	1016.5
10°	1008.5	1008.5	1005.2	1010.1	1010.1
12.5°	1000.4	998.8	997.2	1003.6	1002.0
15°	987.5	987.5	985.9	993.9	992.3
17.5°	971.3	973.0	974.6	981.0	982.6
20°	953.6	956.8	958.4	968.1	968.1
22.5°	937.5	939.1	942.3	952.0	952.0
25°	916.5	919.7	926.2	934.2	935.8
27.5°	895.5	897.1	905.2	916.5	918.1
30°	868.1	872.9	882.6	895.5	897.1
32.5°	843.9	848.7	860.0	872.9	876.1
35°	813.2	819.7	832.6	848.7	851.9
37.5°	785.8	790.6	806.8	824.5	829.4
40°	751.9	761.6	777.7	798.7	806.8
42.5°	718.0	727.7	747.1	774.5	784.2
45°	682.5	693.8	718.0	748.7	761.6
47.5°	647.0	659.9	687.4	722.9	737.4
50°	606.7	622.8	656.7	697.0	713.2
52.5°	568.0	587.3	624.4	669.6	690.6
55°	527.6	547.0	595.4	642.2	664.8
57.5°	482.4	508.3	561.5	614.8	639.0
60°	440.5	464.7	529.2	587.3	611.5
62.5°	395.3	427.6	497.0	558.3	582.5
65°	348.5	384.0	463.1	524.4	548.6
67.5°	306.6	345.3	429.2	490.5	514.7
70°	256.6	305.0	392.1	453.4	477.6
72.5°	209.8	263.0	353.4	413.1	435.7
75°	164.6	224.3	313.0	366.3	377.6
77.5°	122.6	185.6	271.1	293.7	285.6
80°	87.1	148.4	211.4	200.1	204.9
82.5°	56.5	112.9	130.7	148.4	153.3
85°	32.3	66.2	80.7	87.1	90.4
87.5°	14.5	24.2	32.3	32.3	30.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)