

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: P310347

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-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: P310347
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-L82765-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: 3250.0 lumens
Efficiency: N/A
Efficacy: 68.7 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

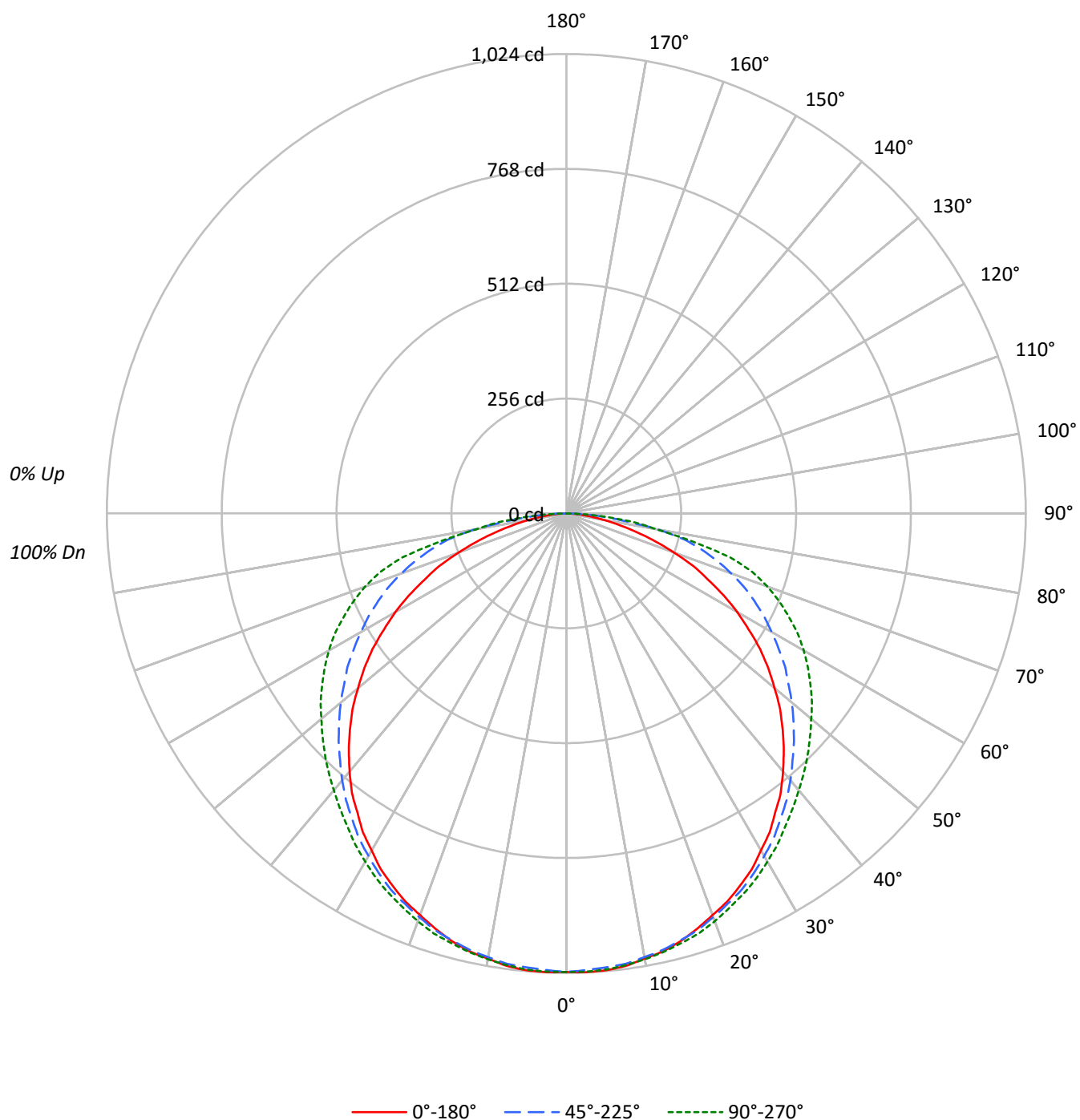
Input Watts (W): 47.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1375	1375	1375
5°	1380	1372	1378
10°	1376	1372	1379
15°	1374	1372	1381
20°	1364	1371	1385
25°	1359	1374	1388
30°	1347	1370	1393
35°	1335	1366	1398
40°	1319	1365	1416
45°	1298	1365	1448
50°	1269	1373	1491
55°	1236	1395	1558
60°	1184	1423	1644
65°	1109	1473	1745
70°	1008	1541	1877
75°	855	1626	1961
80°	675	1636	1586
85°	497	1244	1394



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.9	3.0
10°-20°	279.0	8.6
20°-30°	426.7	13.1
30°-40°	521.6	16.0
40°-50°	555.9	17.1
50°-60°	531.5	16.4
60°-70°	450.3	13.9
70°-80°	302.6	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°	802.6	24.7
0°-40°	1324.3	40.7
0°-60°	2411.7	74.2
0°-90°	3250.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3250.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1022	1022	1022	1022	1022	
5°	1022	1020	1016	1020	1020	97
15°	987	987	985	993	991	278
25°	916	919	925	933	935	422
35°	812	819	832	848	851	509
45°	682	693	717	748	761	526
55°	527	546	595	642	664	469
65°	348	384	463	524	548	346
75°	164	224	313	366	377	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°	1022.0	1022.0	1022.0	1022.0	1022.0
2.5°	1023.6	1023.6	1018.8	1022.0	1022.0
5°	1022.0	1020.4	1015.6	1020.4	1020.4
7.5°	1017.2	1015.6	1012.4	1017.2	1015.6
10°	1007.5	1007.5	1004.3	1009.1	1009.1
12.5°	999.5	997.9	996.2	1002.7	1001.1
15°	986.6	986.6	985.0	993.0	991.4
17.5°	970.4	972.1	973.7	980.1	981.7
20°	952.7	955.9	957.6	967.2	967.2
22.5°	936.6	938.2	941.4	951.1	951.1
25°	915.6	918.9	925.3	933.4	935.0
27.5°	894.7	896.3	904.4	915.6	917.2
30°	867.3	872.1	881.8	894.7	896.3
32.5°	843.1	847.9	859.2	872.1	875.3
35°	812.5	818.9	831.8	847.9	851.2
37.5°	785.1	789.9	806.0	823.8	828.6
40°	751.2	760.9	777.0	798.0	806.0
42.5°	717.4	727.0	746.4	773.8	783.5
45°	681.9	693.2	717.4	748.0	760.9
47.5°	646.4	659.3	686.7	722.2	736.7
50°	606.1	622.2	656.1	696.4	712.5
52.5°	567.4	586.8	623.9	669.0	690.0
55°	527.1	546.5	594.8	641.6	664.2
57.5°	482.0	507.8	561.0	614.2	638.4
60°	440.1	464.3	528.7	586.8	611.0
62.5°	394.9	427.2	496.5	557.8	581.9
65°	348.2	383.7	462.7	523.9	548.1
67.5°	306.3	345.0	428.8	490.1	514.2
70°	256.3	304.7	391.7	453.0	477.2
72.5°	209.6	262.8	353.0	412.7	435.3
75°	164.4	224.1	312.7	365.9	377.2
77.5°	122.5	185.4	270.8	293.4	285.3
80°	87.1	148.3	211.2	199.9	204.7
82.5°	56.4	112.8	130.6	148.3	153.1
85°	32.2	66.1	80.6	87.1	90.3
87.5°	14.5	24.2	32.2	32.2	30.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)