

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: P313695

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-RDP-CA125-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: P313695
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-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 3493.0 lumens
Efficiency: N/A
Efficacy: 73.5 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

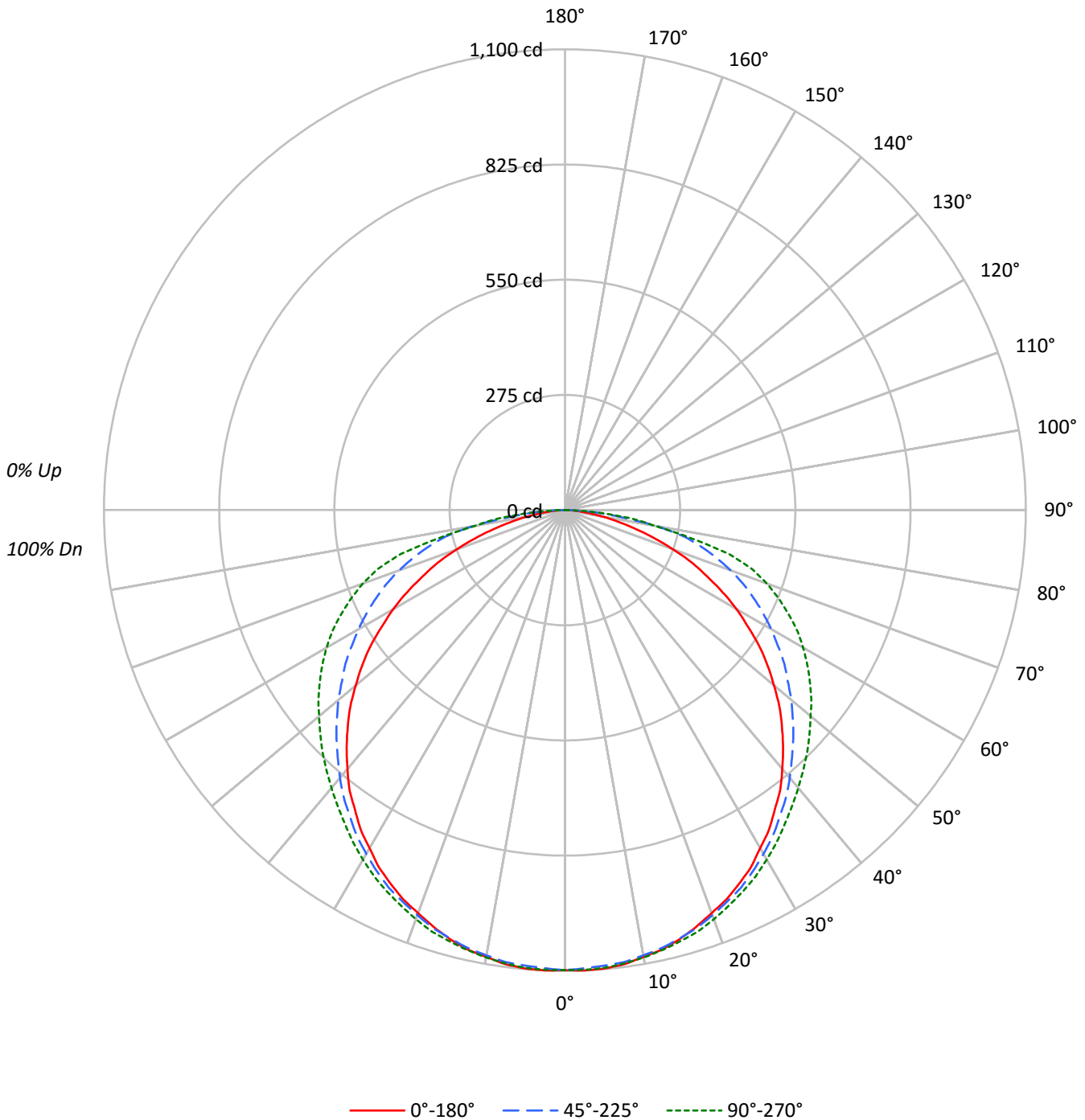
Input Watts (W): 47.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1478	1478	1478
5°	1484	1474	1481
10°	1480	1475	1482
15°	1477	1475	1484
20°	1466	1474	1488
25°	1461	1476	1492
30°	1448	1472	1497
35°	1434	1468	1503
40°	1418	1467	1522
45°	1395	1467	1556
50°	1364	1476	1603
55°	1329	1500	1674
60°	1273	1529	1767
65°	1191	1583	1876
70°	1084	1656	2017
75°	919	1747	2108
80°	725	1759	1705
85°	536	1337	1497



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.2	3.0
10°-20°	299.9	8.6
20°-30°	458.6	13.1
30°-40°	560.6	16.0
40°-50°	597.5	17.1
50°-60°	571.3	16.4
60°-70°	484.0	13.9
70°-80°	325.2	9.3
80°-90°	91.8	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°	862.7	24.7
0°-40°	1423.3	40.7
0°-60°	2592.1	74.2
0°-90°	3493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3493.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1098	1098	1098	1098	1098	
5°	1098	1097	1092	1097	1097	104
15°	1060	1060	1059	1067	1066	299
25°	984	988	994	1003	1005	454
35°	873	880	894	911	915	547
45°	733	745	771	804	818	565
55°	567	587	639	690	714	505
65°	374	412	497	563	589	372
75°	177	241	336	393	405	189
85°	35	71	87	94	97	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1098.4	1098.4	1098.4	1098.4	1098.4
2.5°	1100.2	1100.2	1095.0	1098.4	1098.4
5°	1098.4	1096.7	1091.5	1096.7	1096.7
7.5°	1093.3	1091.5	1088.1	1093.3	1091.5
10°	1082.9	1082.9	1079.4	1084.6	1084.6
12.5°	1074.2	1072.5	1070.7	1077.7	1075.9
15°	1060.3	1060.3	1058.6	1067.3	1065.5
17.5°	1043.0	1044.7	1046.5	1053.4	1055.1
20°	1023.9	1027.4	1029.1	1039.5	1039.5
22.5°	1006.6	1008.4	1011.8	1022.2	1022.2
25°	984.1	987.6	994.5	1003.2	1004.9
27.5°	961.6	963.3	972.0	984.1	985.8
30°	932.1	937.3	947.7	961.6	963.3
32.5°	906.1	911.3	923.5	937.3	940.8
35°	873.2	880.1	894.0	911.3	914.8
37.5°	843.8	849.0	866.3	885.3	890.5
40°	807.4	817.8	835.1	857.6	866.3
42.5°	771.0	781.4	802.2	831.6	842.0
45°	732.9	745.0	771.0	803.9	817.8
47.5°	694.8	708.6	738.1	776.2	791.8
50°	651.4	668.8	705.2	748.5	765.8
52.5°	609.9	630.7	670.5	719.0	741.5
55°	566.6	587.3	639.3	689.6	713.8
57.5°	518.0	545.8	602.9	660.1	686.1
60°	473.0	499.0	568.3	630.7	656.6
62.5°	424.5	459.1	533.6	599.5	625.5
65°	374.2	412.4	497.2	563.1	589.1
67.5°	329.2	370.8	460.9	526.7	552.7
70°	275.5	327.5	421.0	486.9	512.8
72.5°	225.2	282.4	379.4	443.5	467.8
75°	176.7	240.8	336.1	393.3	405.4
77.5°	131.7	199.2	291.1	315.3	306.7
80°	93.6	159.4	227.0	214.8	220.0
82.5°	60.6	121.3	140.3	159.4	164.6
85°	34.7	71.0	86.6	93.6	97.0
87.5°	15.6	26.0	34.7	34.7	32.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)