

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: P313570

Luminaire Tested: **24FCZ2-45HE-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: P313570
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: 24FCZ2-45HE-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: 2597.0 lumens
Efficiency: N/A
Efficacy: 77.1 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

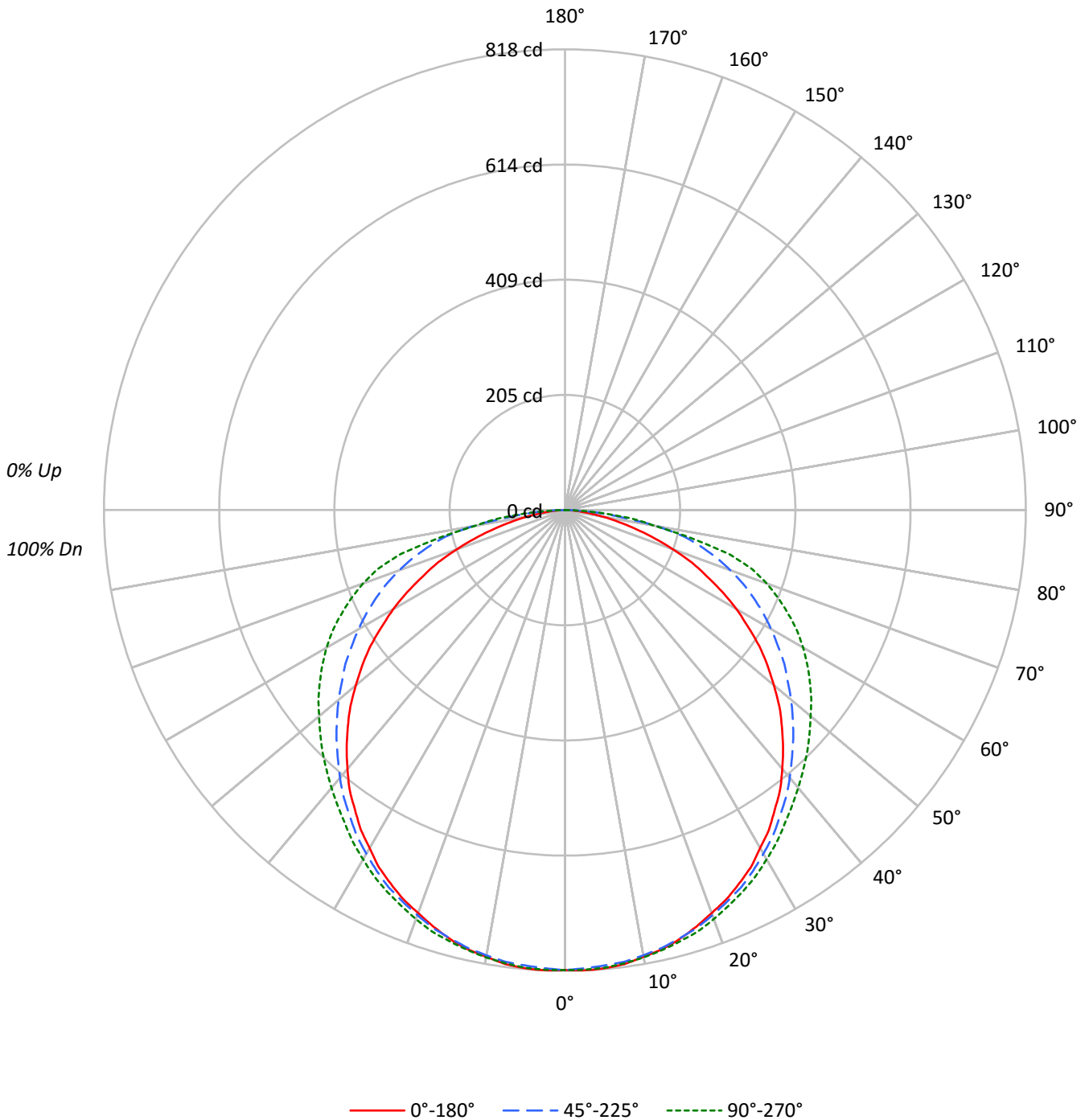
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1099	1099	1099
5°	1103	1096	1101
10°	1100	1096	1102
15°	1098	1096	1103
20°	1090	1096	1107
25°	1086	1098	1109
30°	1077	1095	1113
35°	1066	1092	1117
40°	1054	1091	1131
45°	1037	1091	1157
50°	1014	1097	1192
55°	988	1115	1245
60°	946	1137	1314
65°	886	1177	1394
70°	806	1231	1500
75°	683	1299	1567
80°	539	1307	1268
85°	398	994	1113



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.5	3.0
10°-20°	223.0	8.6
20°-30°	340.9	13.1
30°-40°	416.8	16.0
40°-50°	444.2	17.1
50°-60°	424.7	16.4
60°-70°	359.8	13.9
70°-80°	241.8	9.3
80°-90°	68.2	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°	641.4	24.7
0°-40°	1058.2	40.7
0°-60°	1927.2	74.2
0°-90°	2597.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2597.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	817	817	817	817	817	
5°	817	815	812	815	815	78
15°	788	788	787	794	792	222
25°	732	734	739	746	747	337
35°	649	654	665	678	680	407
45°	545	554	573	598	608	420
55°	421	437	475	513	531	375
65°	278	307	370	419	438	276
75°	131	179	250	292	301	141
85°	26	53	64	70	72	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	816.7	816.7	816.7	816.7	816.7
2.5°	818.0	818.0	814.1	816.7	816.7
5°	816.7	815.4	811.5	815.4	815.4
7.5°	812.8	811.5	809.0	812.8	811.5
10°	805.1	805.1	802.5	806.4	806.4
12.5°	798.6	797.4	796.1	801.2	799.9
15°	788.3	788.3	787.1	793.5	792.2
17.5°	775.5	776.7	778.0	783.2	784.5
20°	761.3	763.9	765.2	772.9	772.9
22.5°	748.4	749.7	752.3	760.0	760.0
25°	731.7	734.2	739.4	745.8	747.1
27.5°	714.9	716.2	722.6	731.7	733.0
30°	693.0	696.9	704.6	714.9	716.2
32.5°	673.7	677.6	686.6	696.9	699.5
35°	649.2	654.4	664.7	677.6	680.1
37.5°	627.3	631.2	644.1	658.2	662.1
40°	600.3	608.0	620.9	637.6	644.1
42.5°	573.2	581.0	596.4	618.3	626.0
45°	544.9	553.9	573.2	597.7	608.0
47.5°	516.5	526.9	548.7	577.1	588.7
50°	484.3	497.2	524.3	556.5	569.4
52.5°	453.4	468.9	498.5	534.6	551.3
55°	421.2	436.7	475.3	512.7	530.7
57.5°	385.2	405.8	448.3	490.8	510.1
60°	351.7	371.0	422.5	468.9	488.2
62.5°	315.6	341.4	396.7	445.7	465.0
65°	278.2	306.6	369.7	418.6	438.0
67.5°	244.7	275.7	342.6	391.6	410.9
70°	204.8	243.5	313.0	362.0	381.3
72.5°	167.5	210.0	282.1	329.8	347.8
75°	131.4	179.1	249.9	292.4	301.4
77.5°	97.9	148.1	216.4	234.4	228.0
80°	69.6	118.5	168.7	159.7	163.6
82.5°	45.1	90.2	104.3	118.5	122.4
85°	25.8	52.8	64.4	69.6	72.1
87.5°	11.6	19.3	25.8	25.8	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)