

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: P310128

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CP250-W2A-U-5700K**

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: P310128
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-L82765-RDP-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5700K 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: 2668.0 lumens
Efficiency: N/A
Efficacy: 76.9 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

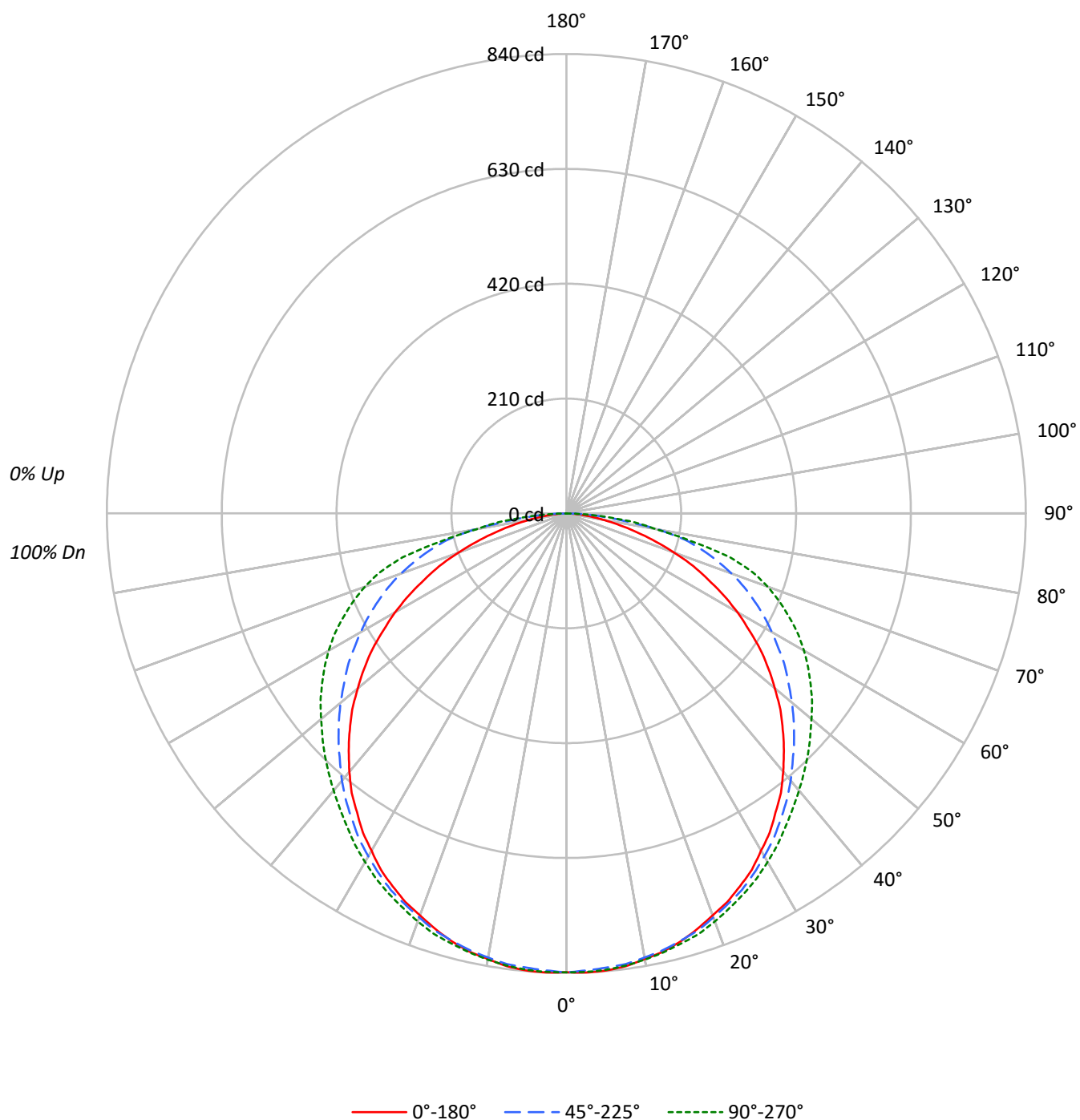
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310128

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-RDP-CP250-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P310128

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-RDP-CP250-W2A-U-5700K

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°	1129	1129	1129
5°	1133	1126	1131
10°	1130	1126	1132
15°	1128	1126	1134
20°	1120	1126	1137
25°	1116	1128	1139
30°	1106	1125	1143
35°	1096	1122	1148
40°	1083	1120	1162
45°	1065	1121	1188
50°	1042	1127	1224
55°	1015	1145	1279
60°	972	1168	1350
65°	910	1209	1432
70°	828	1265	1541
75°	702	1334	1610
80°	554	1344	1303
85°	409	1022	1144



TEST NUMBER: P310128

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-RDP-CP250-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.6	3.0
10°-20°	229.1	8.6
20°-30°	350.3	13.1
30°-40°	428.2	16.0
40°-50°	456.4	17.1
50°-60°	436.4	16.4
60°-70°	369.6	13.9
70°-80°	248.4	9.3
80°-90°	70.1	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°	658.9	24.7
0°-40°	1087.1	40.7
0°-60°	1979.9	74.2
0°-90°	2668.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2668.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	839	839	839	839	839	
5°	839	838	834	838	838	80
15°	810	810	809	815	814	228
25°	752	754	760	766	768	346
35°	667	672	683	696	699	418
45°	560	569	589	614	625	432
55°	433	449	488	527	545	385
65°	286	315	380	430	450	284
75°	135	184	257	300	310	145
85°	26	54	66	72	74	33
90°	0	0	0	0	0	



TEST NUMBER: P310128

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-RDP-CP250-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	839.0	839.0	839.0	839.0	839.0
2.5°	840.3	840.3	836.4	839.0	839.0
5°	839.0	837.7	833.7	837.7	837.7
7.5°	835.0	833.7	831.1	835.0	833.7
10°	827.1	827.1	824.5	828.4	828.4
12.5°	820.5	819.2	817.8	823.1	821.8
15°	809.9	809.9	808.6	815.2	813.9
17.5°	796.7	798.0	799.3	804.6	805.9
20°	782.1	784.8	786.1	794.0	794.0
22.5°	768.9	770.2	772.8	780.8	780.8
25°	751.7	754.3	759.6	766.2	767.5
27.5°	734.5	735.8	742.4	751.7	753.0
30°	712.0	715.9	723.9	734.5	735.8
32.5°	692.1	696.1	705.4	715.9	718.6
35°	667.0	672.3	682.9	696.1	698.7
37.5°	644.5	648.4	661.7	676.2	680.2
40°	616.7	624.6	637.9	655.1	661.7
42.5°	588.9	596.8	612.7	635.2	643.2
45°	559.8	569.0	588.9	614.0	624.6
47.5°	530.7	541.3	563.8	592.9	604.8
50°	497.6	510.8	538.6	571.7	584.9
52.5°	465.8	481.7	512.1	549.2	566.4
55°	432.7	448.6	488.3	526.7	545.2
57.5°	395.7	416.9	460.5	504.2	524.1
60°	361.3	381.1	434.1	481.7	501.6
62.5°	324.2	350.7	407.6	457.9	477.7
65°	285.8	315.0	379.8	430.1	449.9
67.5°	251.4	283.2	352.0	402.3	422.2
70°	210.4	250.1	321.6	371.9	391.7
72.5°	172.0	215.7	289.8	338.8	357.3
75°	135.0	183.9	256.7	300.4	309.7
77.5°	100.6	152.2	222.3	240.9	234.2
80°	71.5	121.7	173.4	164.1	168.1
82.5°	46.3	92.6	107.2	121.7	125.7
85°	26.5	54.3	66.2	71.5	74.1
87.5°	11.9	19.9	26.5	26.5	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)