

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: P310129

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CP250-W2A-U-6500K**

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: P310129
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-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 6500K 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: 2675.0 lumens
Efficiency: N/A
Efficacy: 75.8 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

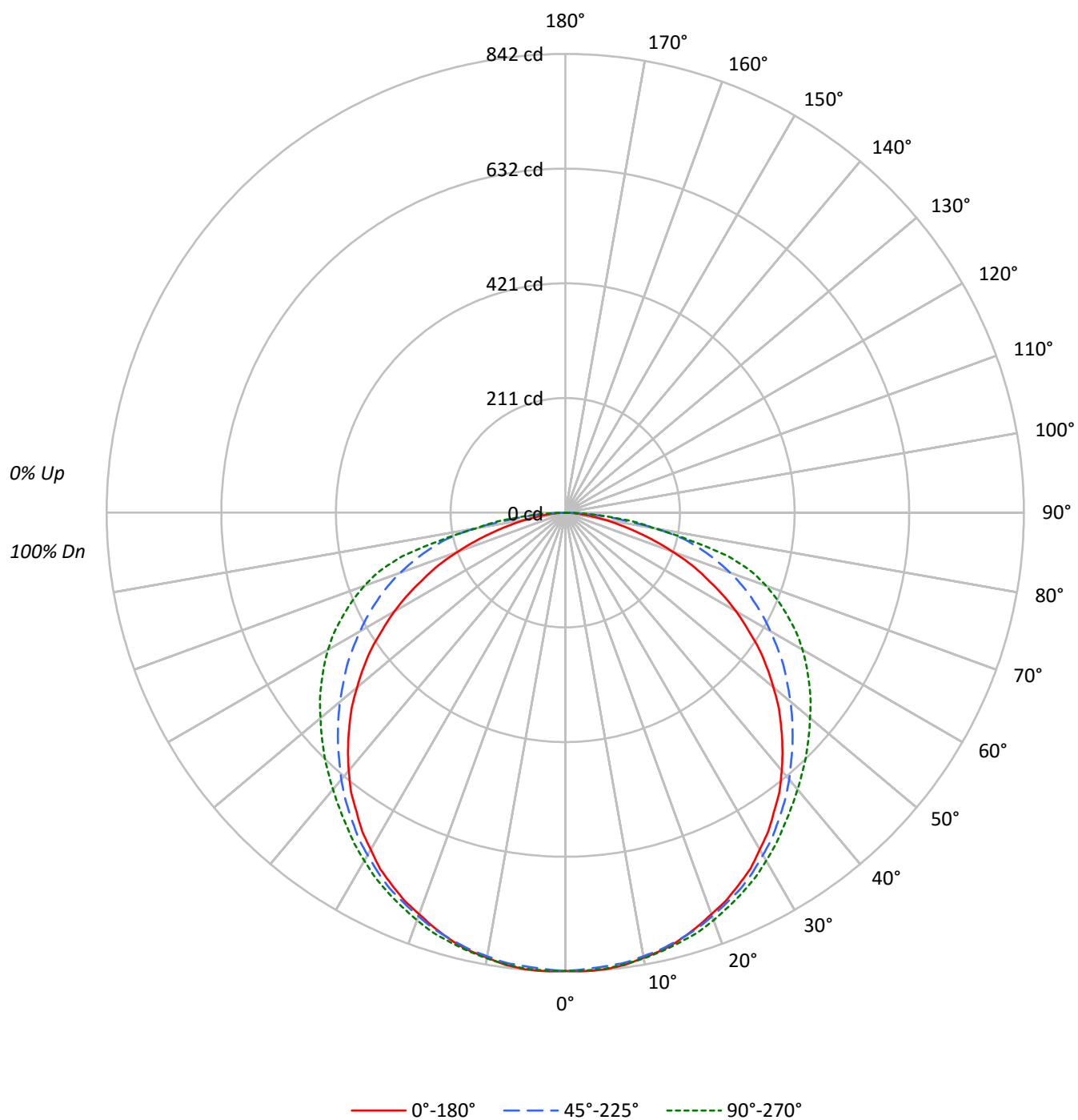
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	1132	1132	1132
5°	1136	1129	1134
10°	1133	1129	1135
15°	1131	1129	1137
20°	1123	1128	1140
25°	1119	1131	1143
30°	1109	1128	1146
35°	1098	1124	1151
40°	1086	1123	1165
45°	1068	1123	1192
50°	1044	1130	1228
55°	1018	1148	1282
60°	975	1171	1353
65°	912	1212	1436
70°	830	1268	1545
75°	703	1338	1614
80°	555	1347	1306
85°	409	1024	1147



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.8	3.0
10°-20°	229.7	8.6
20°-30°	351.2	13.1
30°-40°	429.3	16.0
40°-50°	457.6	17.1
50°-60°	437.5	16.4
60°-70°	370.6	13.9
70°-80°	249.1	9.3
80°-90°	70.2	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°	660.6	24.7
0°-40°	1090.0	40.7
0°-60°	1985.0	74.2
0°-90°	2675.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2675.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	841	840	836	840	840	80
15°	812	812	811	817	816	229
25°	754	756	762	768	770	347
35°	669	674	685	698	701	419
45°	561	570	590	616	626	433
55°	434	450	490	528	547	386
65°	287	316	381	431	451	285
75°	135	184	257	301	310	145
85°	26	54	66	72	74	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	841.2	841.2	841.2	841.2	841.2
2.5°	842.5	842.5	838.6	841.2	841.2
5°	841.2	839.9	835.9	839.9	839.9
7.5°	837.2	835.9	833.3	837.2	835.9
10°	829.3	829.3	826.6	830.6	830.6
12.5°	822.6	821.3	820.0	825.3	824.0
15°	812.0	812.0	810.7	817.3	816.0
17.5°	798.8	800.1	801.4	806.7	808.0
20°	784.2	786.8	788.1	796.1	796.1
22.5°	770.9	772.2	774.9	782.8	782.8
25°	753.6	756.3	761.6	768.2	769.6
27.5°	736.4	737.7	744.4	753.6	755.0
30°	713.8	717.8	725.8	736.4	737.7
32.5°	693.9	697.9	707.2	717.8	720.5
35°	668.7	674.0	684.6	697.9	700.6
37.5°	646.2	650.1	663.4	678.0	682.0
40°	618.3	626.3	639.5	656.8	663.4
42.5°	590.4	598.4	614.3	636.9	644.8
45°	561.2	570.5	590.4	615.6	626.3
47.5°	532.1	542.7	565.2	594.4	606.4
50°	498.9	512.2	540.0	573.2	586.5
52.5°	467.0	483.0	513.5	550.6	567.9
55°	433.9	449.8	489.6	528.1	546.7
57.5°	396.7	418.0	461.7	505.5	525.4
60°	362.2	382.1	435.2	483.0	502.9
62.5°	325.1	351.6	408.7	459.1	479.0
65°	286.6	315.8	380.8	431.2	451.1
67.5°	252.1	283.9	352.9	403.4	423.3
70°	211.0	250.8	322.4	372.8	392.7
72.5°	172.5	216.3	290.6	339.7	358.2
75°	135.3	184.4	257.4	301.2	310.5
77.5°	100.8	152.6	222.9	241.5	234.8
80°	71.6	122.1	173.8	164.5	168.5
82.5°	46.4	92.9	107.5	122.1	126.0
85°	26.5	54.4	66.3	71.6	74.3
87.5°	11.9	19.9	26.5	26.5	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)