

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: P310126

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CP250-W2A-U-5000K**

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: P310126
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5000K 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: 2635.0 lumens
Efficiency: N/A
Efficacy: 76.2 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

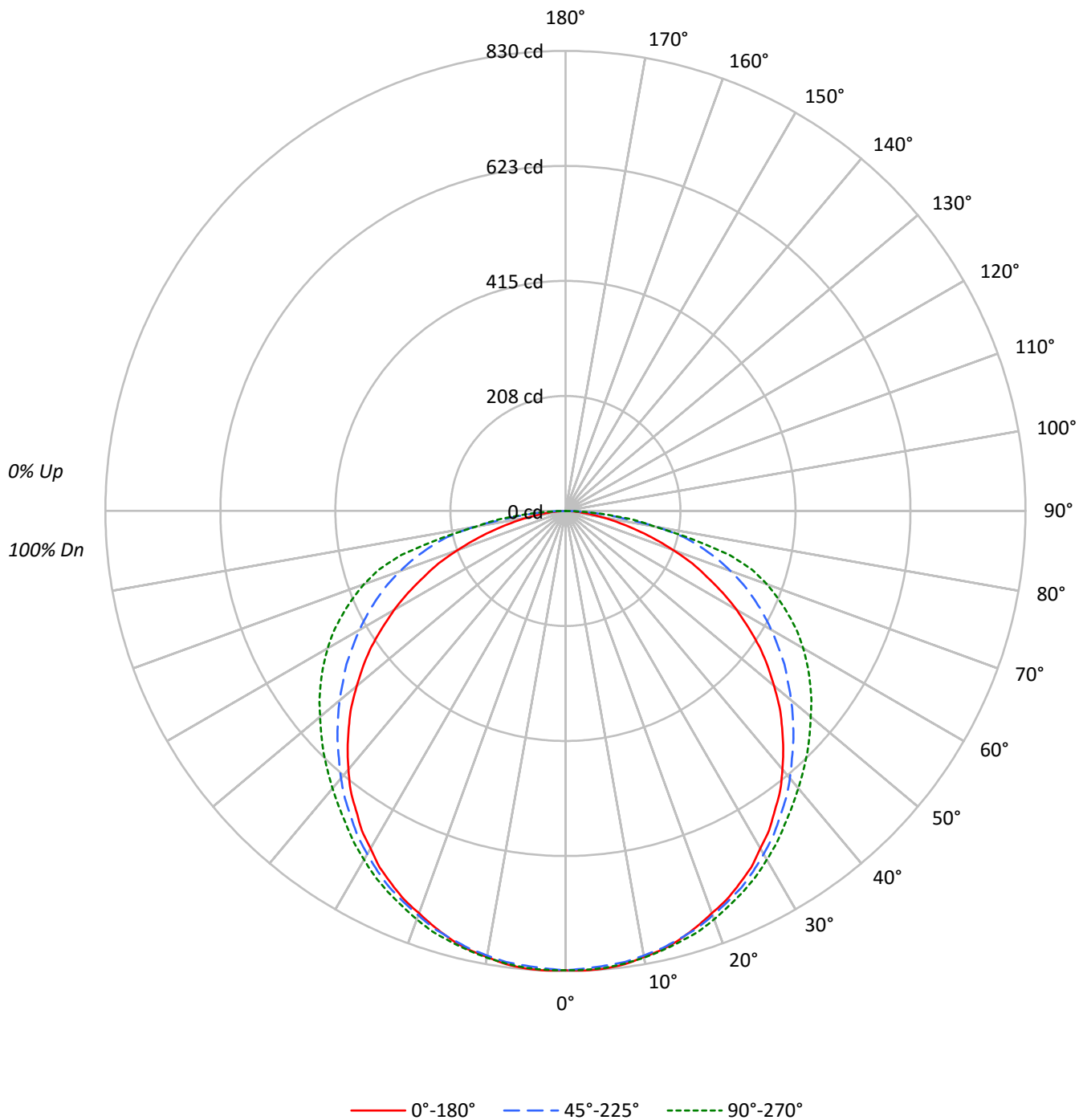
Input Watts (W): 34.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1115	1115	1115
5°	1119	1112	1117
10°	1116	1113	1118
15°	1114	1112	1120
20°	1106	1112	1123
25°	1102	1114	1125
30°	1093	1111	1129
35°	1082	1108	1134
40°	1070	1107	1148
45°	1052	1107	1174
50°	1029	1113	1209
55°	1003	1131	1263
60°	960	1154	1333
65°	899	1194	1415
70°	817	1249	1522
75°	693	1318	1590
80°	547	1327	1286
85°	403	1008	1130



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.6	3.0
10°-20°	226.2	8.6
20°-30°	345.9	13.1
30°-40°	422.9	16.0
40°-50°	450.7	17.1
50°-60°	431.0	16.4
60°-70°	365.1	13.9
70°-80°	245.4	9.3
80°-90°	69.2	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°	650.8	24.7
0°-40°	1073.7	40.7
0°-60°	1955.4	74.2
0°-90°	2635.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2635.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	829	827	823	827	827	79
15°	800	800	799	805	804	226
25°	742	745	750	757	758	342
35°	659	664	674	688	690	413
45°	553	562	582	606	617	426
55°	427	443	482	520	538	381
65°	282	311	375	425	444	280
75°	133	182	254	297	306	143
85°	26	54	65	71	73	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	828.6	828.6	828.6	828.6	828.6
2.5°	829.9	829.9	826.0	828.6	828.6
5°	828.6	827.3	823.4	827.3	827.3
7.5°	824.7	823.4	820.8	824.7	823.4
10°	816.9	816.9	814.3	818.2	818.2
12.5°	810.3	809.0	807.7	812.9	811.6
15°	799.9	799.9	798.6	805.1	803.8
17.5°	786.8	788.1	789.4	794.7	796.0
20°	772.4	775.0	776.4	784.2	784.2
22.5°	759.4	760.7	763.3	771.1	771.1
25°	742.4	745.0	750.2	756.7	758.1
27.5°	725.4	726.7	733.2	742.4	743.7
30°	703.2	707.1	714.9	725.4	726.7
32.5°	683.6	687.5	696.6	707.1	709.7
35°	658.7	664.0	674.4	687.5	690.1
37.5°	636.5	640.4	653.5	667.9	671.8
40°	609.1	616.9	630.0	647.0	653.5
42.5°	581.6	589.5	605.1	627.4	635.2
45°	552.9	562.0	581.6	606.4	616.9
47.5°	524.1	534.6	556.8	585.5	597.3
50°	491.4	504.5	531.9	564.6	577.7
52.5°	460.1	475.7	505.8	542.4	559.4
55°	427.4	443.1	482.3	520.2	538.5
57.5°	390.8	411.7	454.8	498.0	517.6
60°	356.8	376.4	428.7	475.7	495.3
62.5°	320.2	346.4	402.6	452.2	471.8
65°	282.3	311.1	375.1	424.8	444.4
67.5°	248.3	279.7	347.7	397.3	416.9
70°	207.8	247.0	317.6	367.3	386.9
72.5°	169.9	213.0	286.2	334.6	352.9
75°	133.3	181.7	253.6	296.7	305.8
77.5°	99.3	150.3	219.6	237.9	231.3
80°	70.6	120.2	171.2	162.1	166.0
82.5°	45.7	91.5	105.9	120.2	124.2
85°	26.1	53.6	65.3	70.6	73.2
87.5°	11.8	19.6	26.1	26.1	24.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)