

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: P310121

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CP250-W2A-U-2700K**

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: P310121
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 2700K 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: 2348.0 lumens
Efficiency: N/A
Efficacy: 69.5 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

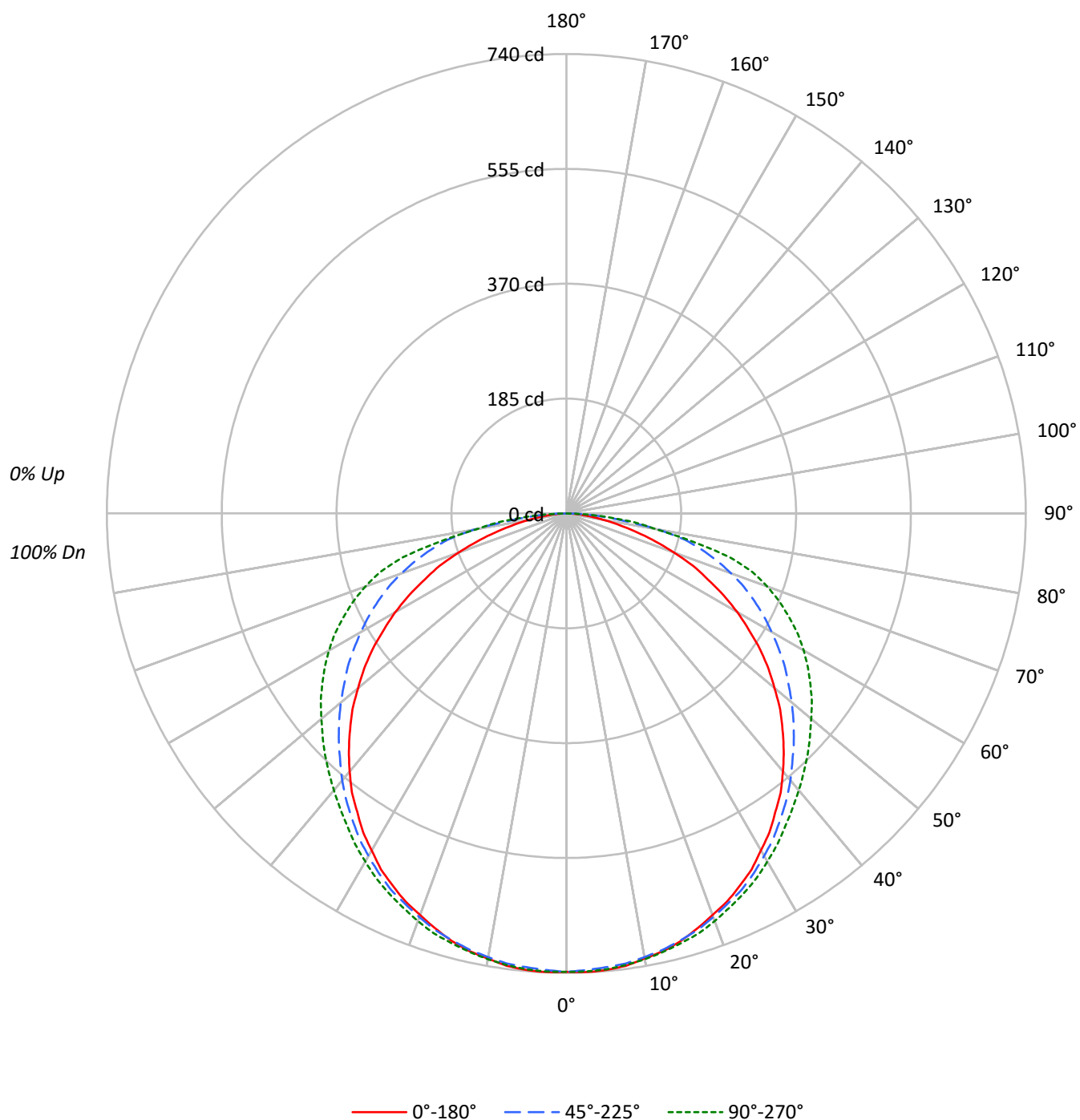
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	994	994	994
5°	997	991	996
10°	994	991	996
15°	993	991	998
20°	986	991	1001
25°	982	992	1003
30°	974	990	1006
35°	964	987	1010
40°	953	986	1023
45°	937	986	1046
50°	917	992	1078
55°	893	1008	1126
60°	855	1028	1188
65°	801	1064	1261
70°	729	1113	1356
75°	618	1174	1417
80°	487	1182	1146
85°	360	898	1007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.0	3.0
10°-20°	201.6	8.6
20°-30°	308.3	13.1
30°-40°	376.8	16.0
40°-50°	401.6	17.1
50°-60°	384.0	16.4
60°-70°	325.3	13.9
70°-80°	218.6	9.3
80°-90°	61.7	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°	579.9	24.7
0°-40°	956.7	40.7
0°-60°	1742.4	74.2
0°-90°	2348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2348.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	738	738	738	738	738	
5°	738	737	734	737	737	70
15°	713	713	712	717	716	201
25°	662	664	668	674	676	305
35°	587	592	601	613	615	368
45°	493	501	518	540	550	380
55°	381	395	430	464	480	339
65°	252	277	334	378	396	250
75°	119	162	226	264	272	127
85°	23	48	58	63	65	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	738.4	738.4	738.4	738.4	738.4
2.5°	739.5	739.5	736.0	738.4	738.4
5°	738.4	737.2	733.7	737.2	737.2
7.5°	734.9	733.7	731.4	734.9	733.7
10°	727.9	727.9	725.6	729.1	729.1
12.5°	722.1	720.9	719.7	724.4	723.2
15°	712.8	712.8	711.6	717.4	716.3
17.5°	701.1	702.3	703.4	708.1	709.3
20°	688.3	690.6	691.8	698.8	698.8
22.5°	676.7	677.8	680.1	687.1	687.1
25°	661.5	663.8	668.5	674.3	675.5
27.5°	646.4	647.5	653.4	661.5	662.7
30°	626.6	630.1	637.1	646.4	647.5
32.5°	609.1	612.6	620.8	630.1	632.4
35°	587.0	591.6	601.0	612.6	614.9
37.5°	567.2	570.7	582.3	595.1	598.6
40°	542.7	549.7	561.4	576.5	582.3
42.5°	518.3	525.3	539.2	559.0	566.0
45°	492.6	500.8	518.3	540.4	549.7
47.5°	467.0	476.3	496.1	521.8	532.2
50°	437.9	449.5	474.0	503.1	514.8
52.5°	410.0	423.9	450.7	483.3	498.5
55°	380.8	394.8	429.8	463.5	479.8
57.5°	348.2	366.9	405.3	443.7	461.2
60°	317.9	335.4	382.0	423.9	441.4
62.5°	285.3	308.6	358.7	403.0	420.4
65°	251.6	277.2	334.3	378.5	396.0
67.5°	221.3	249.2	309.8	354.0	371.5
70°	185.2	220.1	283.0	327.3	344.7
72.5°	151.4	189.8	255.1	298.1	314.5
75°	118.8	161.9	225.9	264.4	272.5
77.5°	88.5	133.9	195.7	212.0	206.1
80°	62.9	107.1	152.6	144.4	147.9
82.5°	40.8	81.5	94.3	107.1	110.6
85°	23.3	47.8	58.2	62.9	65.2
87.5°	10.5	17.5	23.3	23.3	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)