

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: P309858

Luminaire Tested: **24FCZ2-30HE-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: P309858
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: 24FCZ2-30HE-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: 1827.0 lumens
Efficiency: N/A
Efficacy: 84.2 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

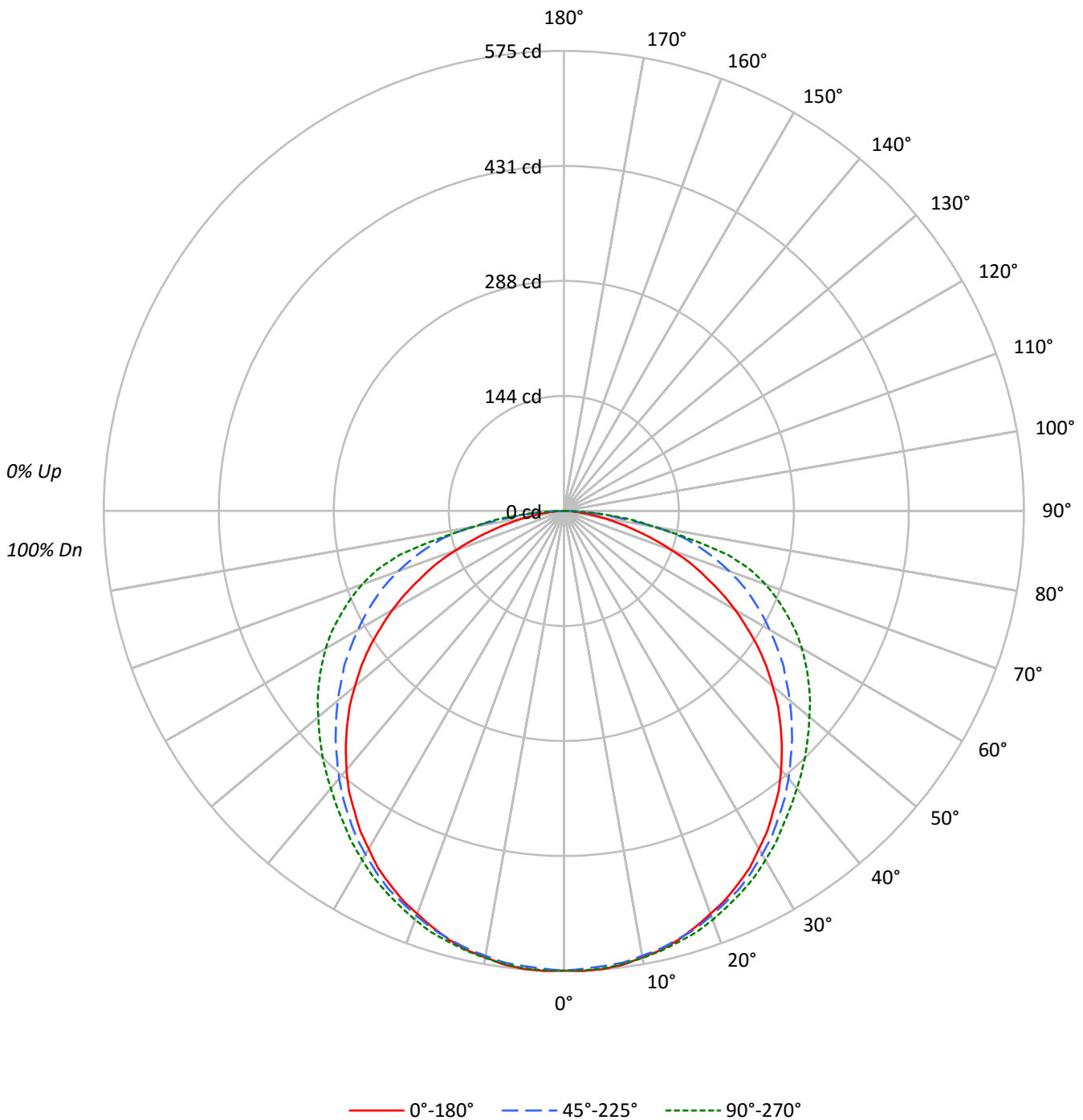
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	773	773	773
5°	776	771	775
10°	774	771	775
15°	773	771	776
20°	767	771	778
25°	764	772	780
30°	757	770	783
35°	750	768	786
40°	742	767	796
45°	729	767	814
50°	713	772	838
55°	695	784	876
60°	666	800	924
65°	623	828	981
70°	567	866	1055
75°	480	914	1103
80°	379	920	892
85°	279	699	783



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.5	3.0
10°-20°	156.9	8.6
20°-30°	239.9	13.1
30°-40°	293.2	16.0
40°-50°	312.5	17.1
50°-60°	298.8	16.4
60°-70°	253.1	13.9
70°-80°	170.1	9.3
80°-90°	48.0	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°	451.2	24.7
0°-40°	744.4	40.7
0°-60°	1355.8	74.2
0°-90°	1827.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1827.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	574	574	571	574	574	55
15°	555	555	554	558	557	156
25°	515	516	520	525	526	237
35°	457	460	468	477	478	286
45°	383	390	403	420	428	296
55°	296	307	334	361	373	264
65°	196	216	260	294	308	194
75°	92	126	176	206	212	99
85°	18	37	45	49	51	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	574.5	574.5	574.5	574.5	574.5
2.5°	575.4	575.4	572.7	574.5	574.5
5°	574.5	573.6	570.9	573.6	573.6
7.5°	571.8	570.9	569.1	571.8	570.9
10°	566.4	566.4	564.6	567.3	567.3
12.5°	561.9	560.9	560.0	563.7	562.8
15°	554.6	554.6	553.7	558.2	557.3
17.5°	545.5	546.4	547.4	551.0	551.9
20°	535.6	537.4	538.3	543.7	543.7
22.5°	526.5	527.4	529.2	534.7	534.7
25°	514.7	516.5	520.2	524.7	525.6
27.5°	502.9	503.9	508.4	514.7	515.6
30°	487.5	490.3	495.7	502.9	503.9
32.5°	473.9	476.7	483.0	490.3	492.1
35°	456.7	460.4	467.6	476.7	478.5
37.5°	441.3	444.0	453.1	463.1	465.8
40°	422.3	427.7	436.8	448.6	453.1
42.5°	403.3	408.7	419.6	435.0	440.4
45°	383.3	389.7	403.3	420.5	427.7
47.5°	363.4	370.6	386.0	406.0	414.1
50°	340.7	349.8	368.8	391.5	400.5
52.5°	319.0	329.9	350.7	376.1	387.9
55°	296.3	307.2	334.4	360.7	373.4
57.5°	271.0	285.5	315.4	345.3	358.9
60°	247.4	261.0	297.2	329.9	343.5
62.5°	222.0	240.1	279.1	313.5	327.1
65°	195.7	215.7	260.1	294.5	308.1
67.5°	172.2	193.9	241.1	275.5	289.1
70°	144.1	171.3	220.2	254.6	268.2
72.5°	117.8	147.7	198.5	232.0	244.7
75°	92.4	126.0	175.8	205.7	212.1
77.5°	68.9	104.2	152.2	164.9	160.4
80°	48.9	83.4	118.7	112.4	115.1
82.5°	31.7	63.4	73.4	83.4	86.1
85°	18.1	37.2	45.3	48.9	50.7
87.5°	8.2	13.6	18.1	18.1	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)