

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: P309180

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CP250-W2A-U-4500K**

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: P309180
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 4500K 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: 2008.0 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

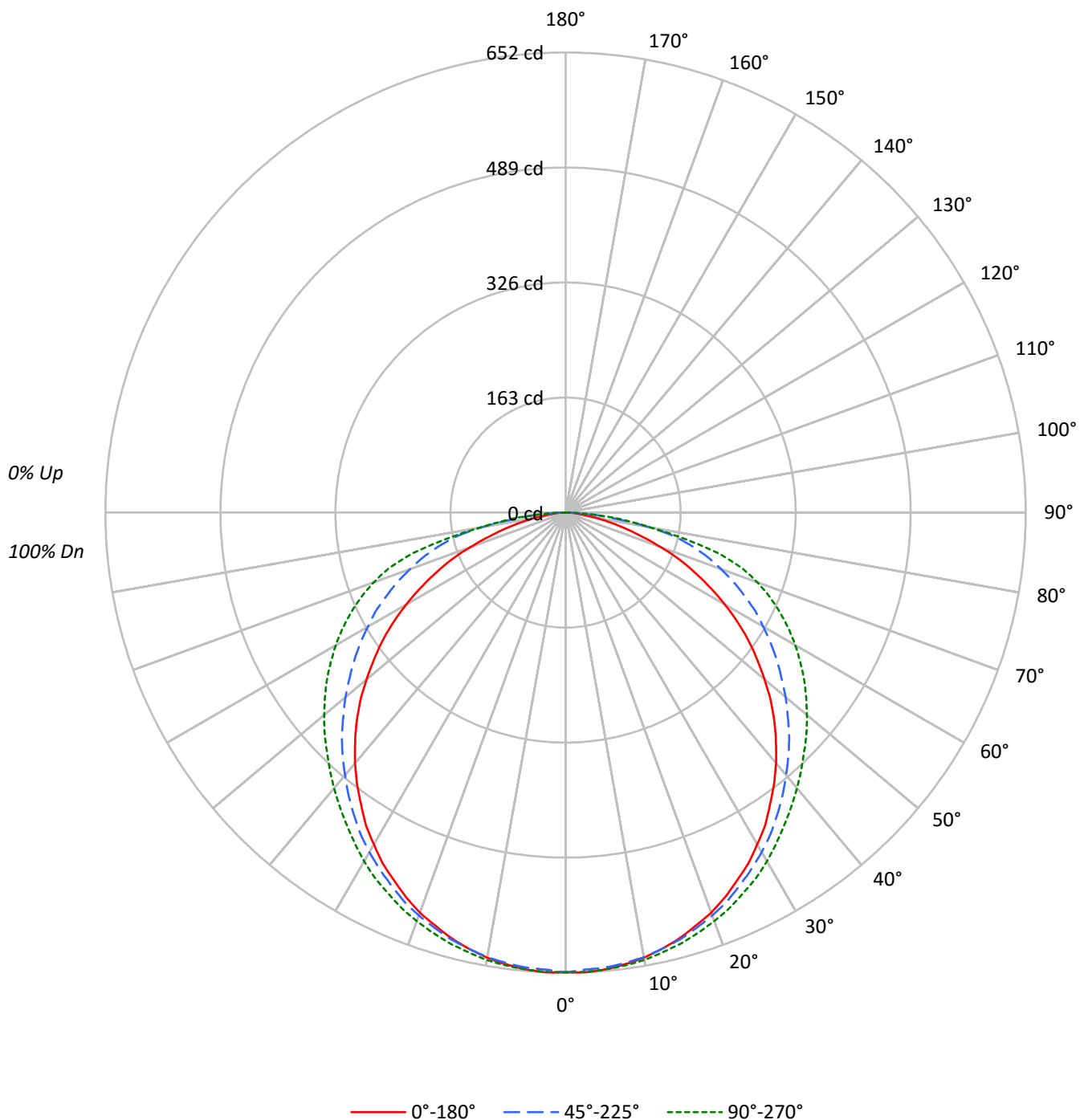
Input Watts (W): 21.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	877	877	877
5°	878	874	878
10°	875	874	880
15°	870	872	881
20°	864	870	882
25°	854	866	884
30°	844	863	887
35°	830	859	888
40°	815	853	896
45°	797	853	910
50°	771	852	934
55°	743	858	968
60°	701	871	1011
65°	648	891	1068
70°	565	923	1138
75°	459	970	1175
80°	339	951	951
85°	259	701	792



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.7	3.1
10°-20°	177.2	8.8
20°-30°	269.8	13.4
30°-40°	327.6	16.3
40°-50°	346.1	17.2
50°-60°	326.6	16.3
60°-70°	271.6	13.5
70°-80°	178.7	8.9
80°-90°	48.7	2.4
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°	508.8	25.3
0°-40°	836.4	41.7
0°-60°	1509.1	75.2
0°-90°	2008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	652	652	652	652	652	
5°	650	650	647	650	650	62
15°	625	625	626	632	632	176
25°	575	578	583	594	595	265
35°	505	511	523	536	540	316
45°	419	427	448	470	478	322
55°	317	330	366	400	413	282
65°	203	227	280	321	335	201
75°	88	129	187	221	226	95
85°	17	37	45	50	51	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	651.5	651.5	651.5	651.5	651.5
2.5°	652.3	651.5	648.1	651.5	651.5
5°	649.8	649.8	647.3	649.8	649.8
7.5°	645.6	645.6	643.9	647.3	647.3
10°	640.6	640.6	639.7	643.9	643.9
12.5°	633.0	633.8	633.0	638.0	638.0
15°	624.6	625.4	626.3	632.2	632.2
17.5°	613.7	615.3	617.0	623.8	624.6
20°	603.6	604.4	607.8	615.3	616.2
22.5°	590.1	592.7	596.9	604.4	606.9
25°	575.0	578.4	583.4	593.5	595.2
27.5°	560.7	563.2	570.0	580.9	584.2
30°	543.1	547.3	555.7	566.6	570.8
32.5°	526.2	530.4	540.5	552.3	555.7
35°	505.2	511.1	522.9	536.3	540.5
37.5°	485.1	490.9	505.2	520.4	525.4
40°	464.0	470.8	485.9	503.5	510.3
42.5°	441.3	450.6	467.4	486.7	494.3
45°	418.6	427.0	448.1	469.9	478.3
47.5°	394.3	404.3	427.0	453.1	463.2
50°	368.2	380.8	406.9	435.5	446.4
52.5°	342.1	356.4	385.9	417.8	429.6
55°	316.9	330.4	365.7	400.1	412.8
57.5°	289.2	306.0	344.7	381.7	394.3
60°	260.6	279.1	323.6	362.3	375.8
62.5°	232.0	253.0	303.5	342.1	356.4
65°	203.4	227.0	279.9	321.1	335.4
67.5°	175.7	201.8	258.1	299.3	313.6
70°	143.7	176.5	234.5	274.9	289.2
72.5°	114.3	152.2	211.8	249.7	262.3
75°	88.3	128.6	186.6	221.1	226.1
77.5°	64.7	105.1	160.6	172.3	173.2
80°	43.7	84.1	122.7	121.1	122.7
82.5°	28.6	63.0	77.3	86.6	87.4
85°	16.8	37.0	45.4	50.4	51.3
87.5°	8.4	12.6	16.0	16.8	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)