

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: P310531

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-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: P310531
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 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: 2682.0 lumens
Efficiency: N/A
Efficacy: 124.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

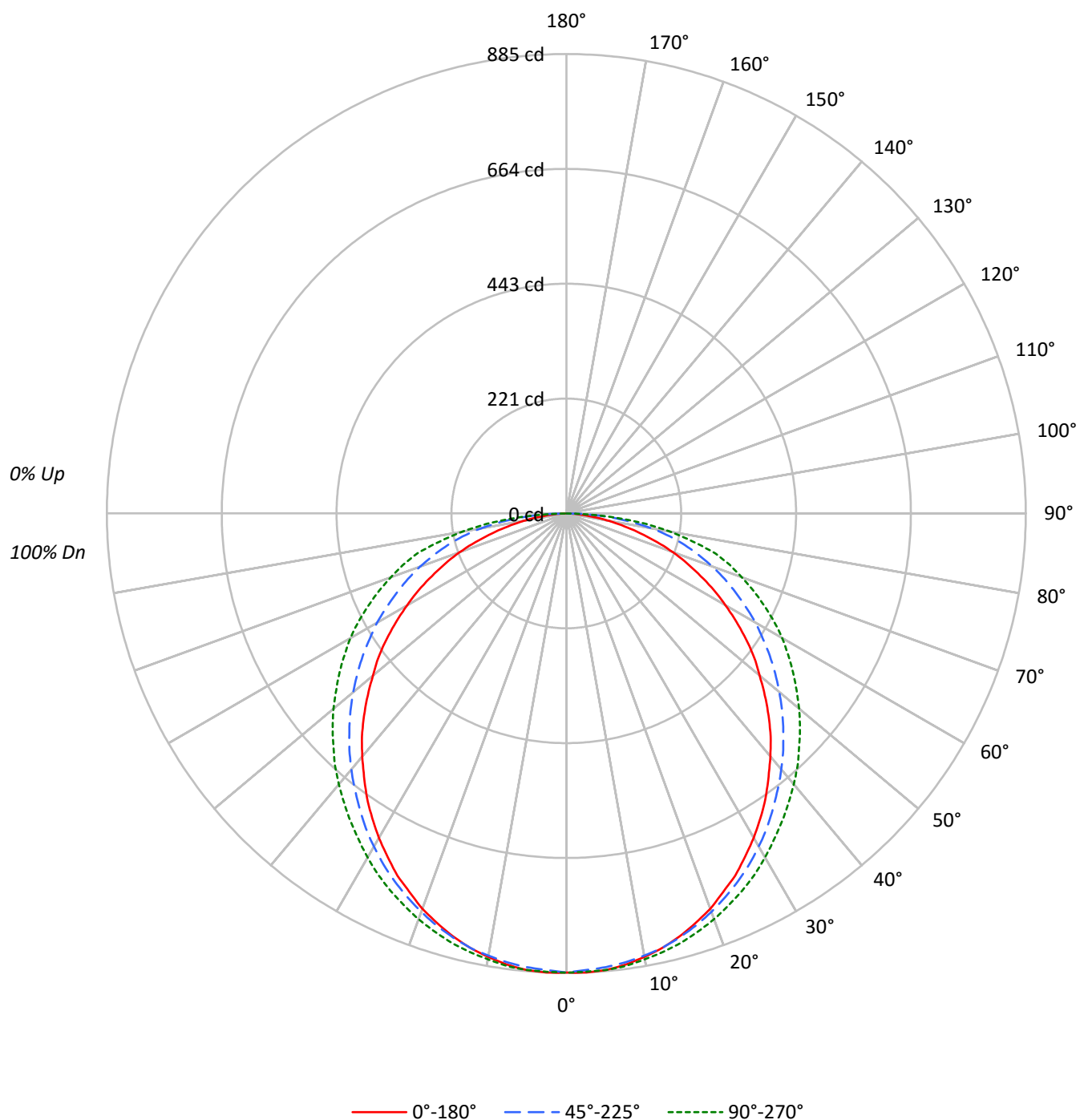
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	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	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1190	1190	1190
5°	1192	1185	1192
10°	1185	1182	1191
15°	1175	1177	1192
20°	1161	1170	1191
25°	1143	1161	1190
30°	1121	1152	1189
35°	1099	1140	1190
40°	1074	1131	1197
45°	1048	1124	1207
50°	1017	1121	1226
55°	992	1123	1250
60°	953	1133	1293
65°	909	1145	1340
70°	861	1180	1414
75°	768	1231	1545
80°	655	1303	1579
85°	468	1291	1511



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.7	3.1
10°-20°	239.3	8.9
20°-30°	361.5	13.5
30°-40°	435.7	16.2
40°-50°	457.4	17.1
50°-60°	427.9	16.0
60°-70°	353.4	13.2
70°-80°	240.8	9.0
80°-90°	82.1	3.1
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°	684.6	25.5
0°-40°	1120.3	41.8
0°-60°	2005.7	74.8
0°-90°	2682.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2682.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	884	884	884	884	884	
5°	883	882	877	883	883	84
15°	844	844	845	854	856	238
25°	770	773	782	797	802	354
35°	669	676	694	717	724	418
45°	551	562	591	623	634	425
55°	423	440	479	518	533	377
65°	286	310	360	405	421	283
75°	148	182	237	281	297	158
85°	30	60	84	94	98	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	884.5	884.5	884.5	884.5	884.5
2.5°	885.4	884.5	880.1	884.5	883.6
5°	882.7	881.8	877.4	882.7	882.7
7.5°	876.5	876.5	872.0	878.3	879.2
10°	867.6	867.6	864.9	872.0	872.0
12.5°	856.9	856.9	856.9	864.0	864.9
15°	843.6	844.5	845.3	854.2	856.0
17.5°	827.6	829.3	832.0	842.7	844.5
20°	810.6	812.4	816.9	829.3	832.0
22.5°	789.3	793.7	800.0	814.2	816.9
25°	769.7	773.3	782.2	797.3	801.7
27.5°	745.7	751.0	762.6	778.6	784.8
30°	721.7	727.0	741.2	759.9	765.3
32.5°	695.9	703.9	719.0	738.6	744.8
35°	669.2	676.3	694.1	717.2	724.3
37.5°	639.8	649.6	669.2	694.1	703.0
40°	611.3	622.0	644.2	670.9	681.6
42.5°	582.8	593.5	618.4	648.7	659.4
45°	550.8	562.4	590.9	622.9	634.5
47.5°	518.8	533.0	564.2	598.0	610.4
50°	485.9	501.9	535.7	571.3	585.5
52.5°	456.5	471.6	507.2	545.5	558.8
55°	422.7	439.6	478.7	517.9	533.0
57.5°	388.0	406.7	448.5	491.2	506.3
60°	354.2	374.6	420.9	463.6	480.5
62.5°	321.2	341.7	389.7	434.2	451.1
65°	285.6	309.7	359.5	404.9	420.9
67.5°	251.8	277.6	330.1	374.6	390.6
70°	218.9	243.8	299.9	343.5	359.5
72.5°	183.3	211.8	267.8	313.2	330.1
75°	147.7	181.5	236.7	281.2	297.2
77.5°	114.8	149.5	204.7	241.1	249.2
80°	84.5	120.1	168.2	194.0	203.8
82.5°	54.3	89.9	128.1	146.8	154.8
85°	30.3	59.6	83.6	94.3	97.9
87.5°	12.5	25.8	33.8	38.3	38.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)