

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: P309181

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-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: P309181
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-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 2035.0 lumens
Efficiency: N/A
Efficacy: 94.2 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

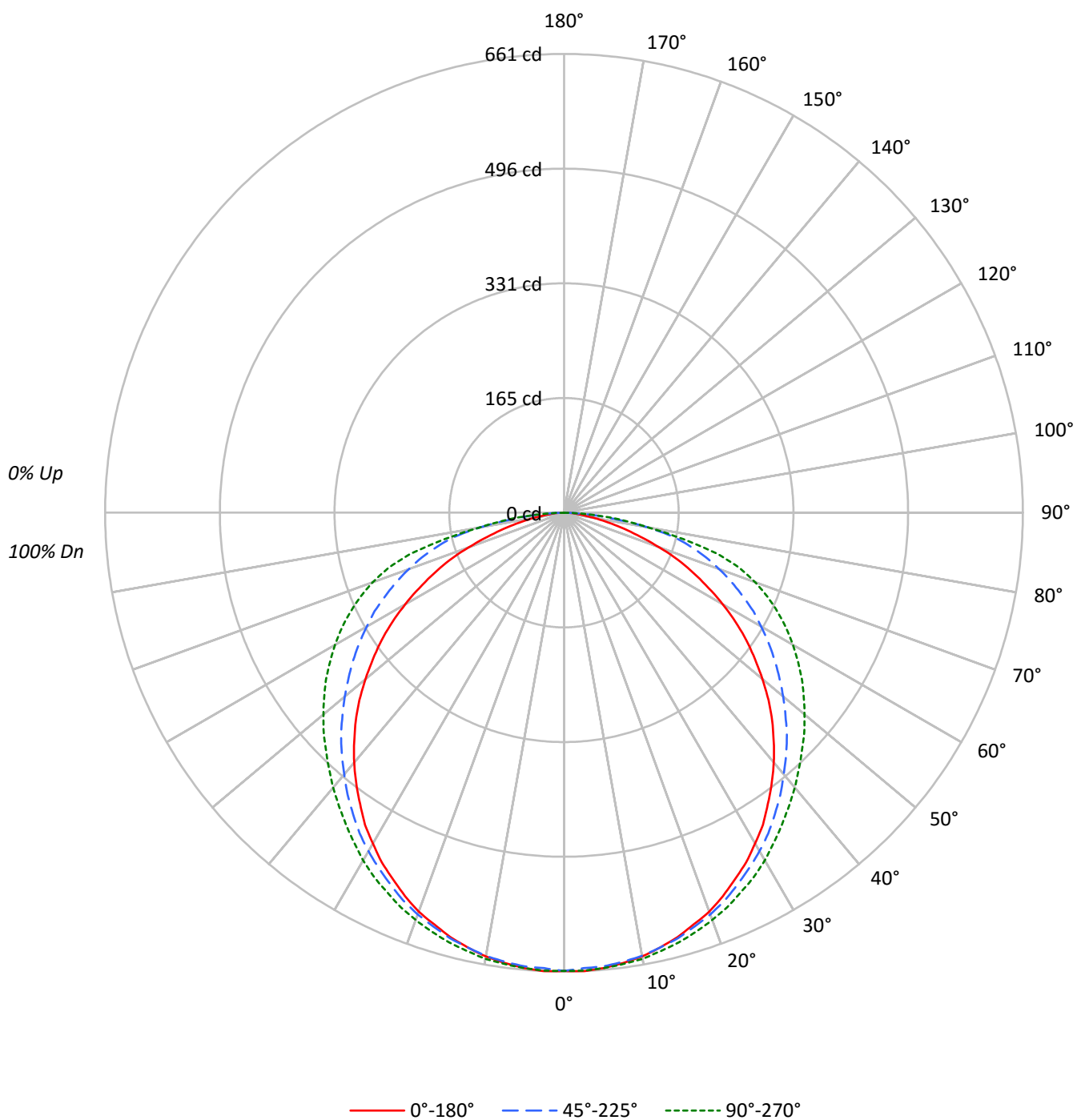
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	888	888	888
5°	890	886	890
10°	887	886	892
15°	882	884	892
20°	876	882	894
25°	865	878	896
30°	855	875	899
35°	841	870	900
40°	826	865	908
45°	807	864	922
50°	781	863	947
55°	753	869	981
60°	711	883	1025
65°	656	903	1082
70°	573	935	1153
75°	465	983	1192
80°	343	964	964
85°	262	710	803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.5	3.1
10°-20°	179.6	8.8
20°-30°	273.4	13.4
30°-40°	332.0	16.3
40°-50°	350.8	17.2
50°-60°	331.0	16.3
60°-70°	275.2	13.5
70°-80°	181.1	8.9
80°-90°	49.4	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°	515.6	25.3
0°-40°	847.6	41.7
0°-60°	1529.4	75.2
0°-90°	2035.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2035.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	660	660	660	660	660	
5°	659	659	656	659	659	63
15°	633	634	635	641	641	179
25°	583	586	591	602	603	269
35°	512	518	530	544	548	321
45°	424	433	454	476	485	327
55°	321	335	371	406	418	286
65°	206	230	284	325	340	204
75°	90	130	189	224	229	96
85°	17	38	46	51	52	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	660.3	660.3	660.3	660.3	660.3
2.5°	661.1	660.3	656.8	660.3	660.3
5°	658.6	658.6	656.0	658.6	658.6
7.5°	654.3	654.3	652.6	656.0	656.0
10°	649.2	649.2	648.3	652.6	652.6
12.5°	641.5	642.4	641.5	646.6	646.6
15°	633.0	633.8	634.7	640.7	640.7
17.5°	621.9	623.6	625.3	632.1	633.0
20°	611.7	612.5	616.0	623.6	624.5
22.5°	598.1	600.6	604.9	612.5	615.1
25°	582.7	586.1	591.2	601.5	603.2
27.5°	568.2	570.8	577.6	588.7	592.1
30°	550.4	554.6	563.1	574.2	578.5
32.5°	533.3	537.6	547.8	559.7	563.1
35°	512.0	518.0	529.9	543.5	547.8
37.5°	491.6	497.5	512.0	527.4	532.5
40°	470.3	477.1	492.4	510.3	517.1
42.5°	447.3	456.6	473.7	493.3	500.9
45°	424.3	432.8	454.1	476.2	484.8
47.5°	399.6	409.8	432.8	459.2	469.4
50°	373.2	385.9	412.3	441.3	452.4
52.5°	346.7	361.2	391.0	423.4	435.3
55°	321.2	334.8	370.6	405.5	418.3
57.5°	293.1	310.1	349.3	386.8	399.6
60°	264.1	282.8	328.0	367.2	380.8
62.5°	235.1	256.4	307.6	346.7	361.2
65°	206.2	230.0	283.7	325.4	339.9
67.5°	178.1	204.5	261.5	303.3	317.8
70°	145.7	178.9	237.7	278.6	293.1
72.5°	115.9	154.2	214.7	253.0	265.8
75°	89.5	130.3	189.1	224.1	229.2
77.5°	65.6	106.5	162.7	174.6	175.5
80°	44.3	85.2	124.4	122.7	124.4
82.5°	29.0	63.9	78.4	87.8	88.6
85°	17.0	37.5	46.0	51.1	52.0
87.5°	8.5	12.8	16.2	17.0	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)