

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: P309176

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-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: P309176
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-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 1813.0 lumens
Efficiency: N/A
Efficacy: 85.9 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

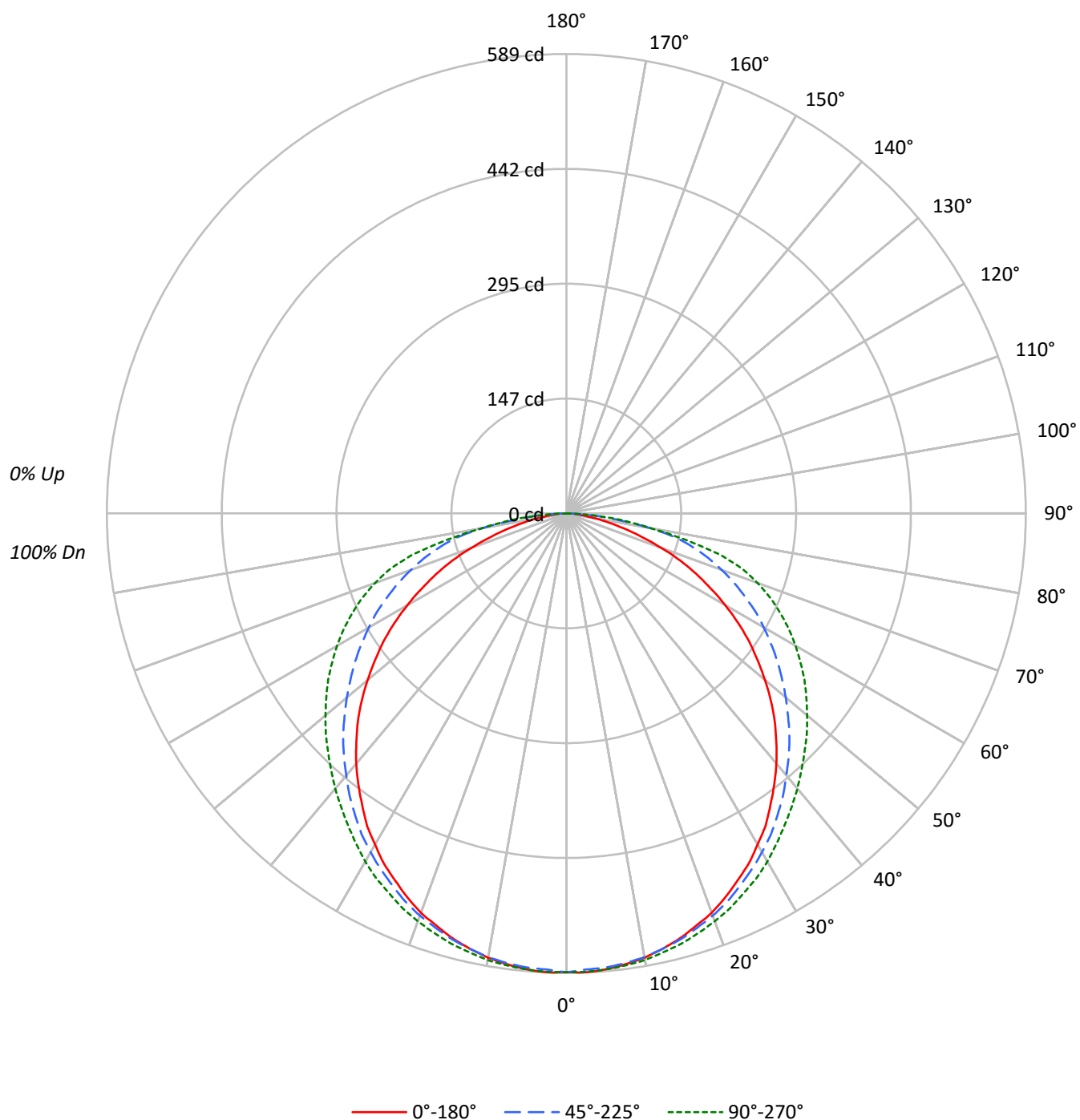
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	791	791	791
5°	792	789	792
10°	790	789	794
15°	785	788	795
20°	780	786	797
25°	771	782	798
30°	762	779	801
35°	749	775	802
40°	736	771	809
45°	719	770	822
50°	696	769	844
55°	671	775	874
60°	633	786	913
65°	585	805	964
70°	511	833	1027
75°	414	876	1062
80°	306	859	859
85°	235	633	715



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.7	3.1
10°-20°	160.0	8.8
20°-30°	243.6	13.4
30°-40°	295.8	16.3
40°-50°	312.5	17.2
50°-60°	294.9	16.3
60°-70°	245.2	13.5
70°-80°	161.3	8.9
80°-90°	44.0	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°	459.4	25.3
0°-40°	755.1	41.7
0°-60°	1362.5	75.2
0°-90°	1813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1813.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	588	588	588	588	588	
5°	587	587	584	587	587	56
15°	564	565	566	571	571	159
25°	519	522	527	536	537	239
35°	456	462	472	484	488	286
45°	378	386	404	424	432	291
55°	286	298	330	361	373	255
65°	184	205	253	290	303	182
75°	80	116	168	200	204	86
85°	15	33	41	46	46	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	588.2	588.2	588.2	588.2	588.2
2.5°	589.0	588.2	585.2	588.2	588.2
5°	586.7	586.7	584.4	586.7	586.7
7.5°	582.9	582.9	581.4	584.4	584.4
10°	578.4	578.4	577.6	581.4	581.4
12.5°	571.5	572.3	571.5	576.1	576.1
15°	563.9	564.7	565.5	570.8	570.8
17.5°	554.1	555.6	557.1	563.2	563.9
20°	545.0	545.7	548.8	555.6	556.4
22.5°	532.8	535.1	538.9	545.7	548.0
25°	519.2	522.2	526.7	535.9	537.4
27.5°	506.3	508.5	514.6	524.5	527.5
30°	490.3	494.1	501.7	511.6	515.4
32.5°	475.1	478.9	488.0	498.7	501.7
35°	456.2	461.5	472.1	484.2	488.0
37.5°	437.9	443.3	456.2	469.8	474.4
40°	419.0	425.0	438.7	454.6	460.7
42.5°	398.5	406.8	422.0	439.5	446.3
45°	378.0	385.6	404.5	424.3	431.9
47.5°	356.0	365.1	385.6	409.1	418.2
50°	332.4	343.8	367.4	393.2	403.0
52.5°	308.9	321.8	348.4	377.2	387.9
55°	286.1	298.3	330.2	361.3	372.7
57.5°	261.1	276.3	311.2	344.6	356.0
60°	235.3	252.0	292.2	327.1	339.3
62.5°	209.5	228.5	274.0	308.9	321.8
65°	183.7	204.9	252.7	289.9	302.8
67.5°	158.6	182.2	233.0	270.2	283.1
70°	129.8	159.4	211.8	248.2	261.1
72.5°	103.2	137.4	191.3	225.4	236.8
75°	79.7	116.1	168.5	199.6	204.2
77.5°	58.4	94.9	145.0	155.6	156.4
80°	39.5	75.9	110.8	109.3	110.8
82.5°	25.8	56.9	69.8	78.2	78.9
85°	15.2	33.4	41.0	45.5	46.3
87.5°	7.6	11.4	14.4	15.2	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)