

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: P309140

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CA08-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: P309140
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-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 1954.0 lumens
Efficiency: N/A
Efficacy: 92.6 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

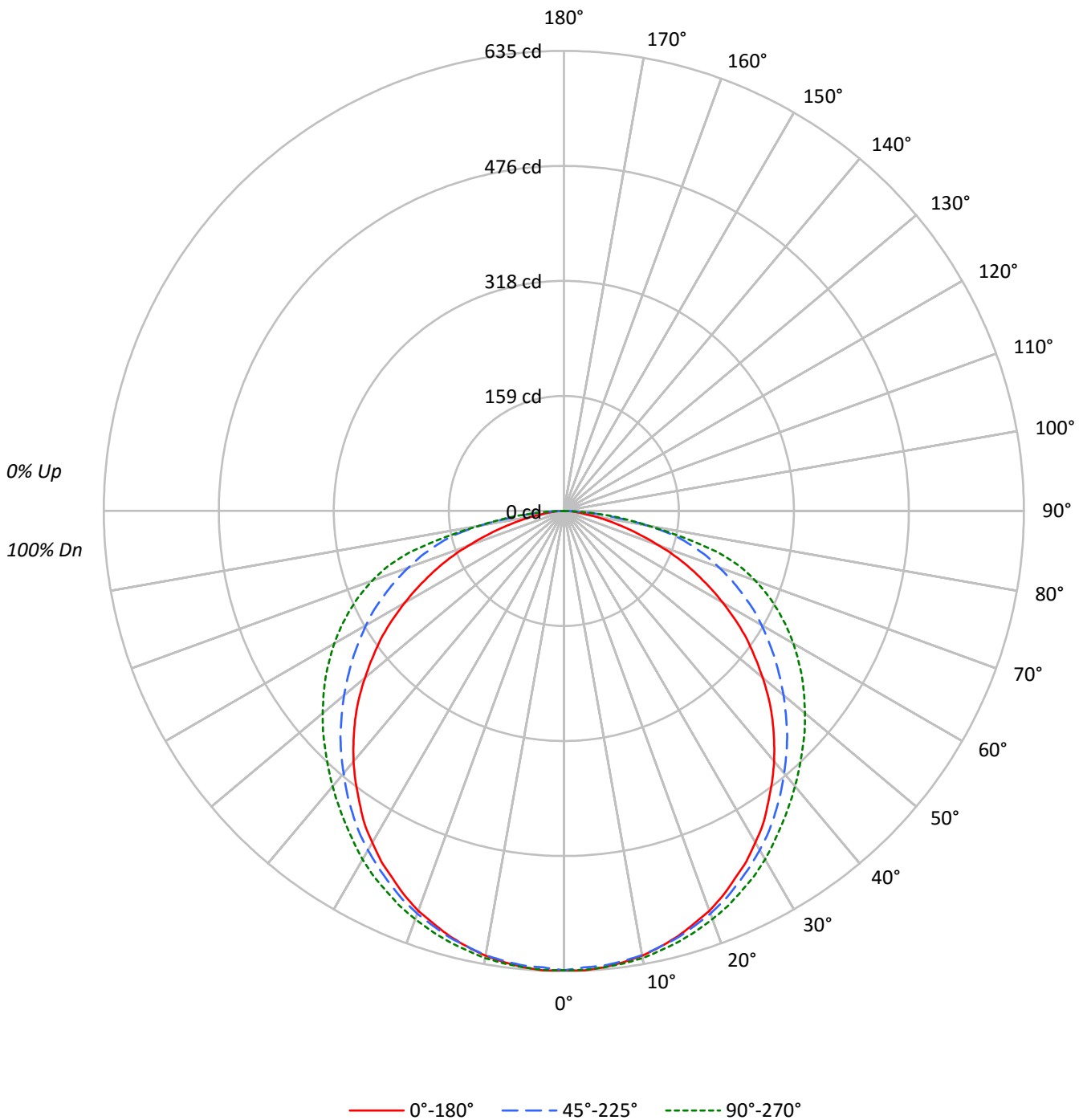
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	853	853	853
5°	854	851	854
10°	852	850	856
15°	847	849	857
20°	841	847	859
25°	831	843	860
30°	821	840	863
35°	807	836	864
40°	793	830	872
45°	775	830	886
50°	750	829	909
55°	723	835	942
60°	682	847	984
65°	630	867	1039
70°	550	898	1107
75°	447	944	1144
80°	329	925	925
85°	253	682	770



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.1	3.1
10°-20°	172.5	8.8
20°-30°	262.6	13.4
30°-40°	318.8	16.3
40°-50°	336.8	17.2
50°-60°	317.8	16.3
60°-70°	264.2	13.5
70°-80°	173.9	8.9
80°-90°	47.4	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°	495.1	25.3
0°-40°	813.9	41.7
0°-60°	1468.5	75.2
0°-90°	1954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	632	632	630	632	632	60
15°	608	609	609	615	615	171
25°	560	563	568	578	579	258
35°	492	497	509	522	526	308
45°	407	416	436	457	466	314
55°	308	322	356	389	402	275
65°	198	221	272	312	326	196
75°	86	125	182	215	220	93
85°	16	36	44	49	50	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	634.0	634.0	634.0	634.0	634.0
2.5°	634.8	634.0	630.7	634.0	634.0
5°	632.3	632.3	629.9	632.3	632.3
7.5°	628.3	628.3	626.6	629.9	629.9
10°	623.3	623.3	622.5	626.6	626.6
12.5°	616.0	616.8	616.0	620.9	620.9
15°	607.8	608.6	609.4	615.2	615.2
17.5°	597.2	598.8	600.4	607.0	607.8
20°	587.3	588.2	591.4	598.8	599.6
22.5°	574.3	576.7	580.8	588.2	590.6
25°	559.5	562.8	567.7	577.5	579.2
27.5°	545.6	548.1	554.6	565.3	568.5
30°	528.5	532.5	540.7	551.4	555.4
32.5°	512.1	516.2	526.0	537.4	540.7
35°	491.6	497.4	508.8	521.9	526.0
37.5°	472.0	477.7	491.6	506.4	511.3
40°	451.6	458.1	472.8	490.0	496.5
42.5°	429.5	438.5	454.8	473.6	481.0
45°	407.4	415.6	436.0	457.3	465.5
47.5°	383.7	393.5	415.6	440.9	450.7
50°	358.3	370.6	395.9	423.7	434.4
52.5°	332.9	346.8	375.5	406.6	418.0
55°	308.4	321.5	355.8	389.4	401.7
57.5°	281.4	297.8	335.4	371.4	383.7
60°	253.6	271.6	314.9	352.6	365.7
62.5°	225.8	246.2	295.3	332.9	346.8
65°	198.0	220.9	272.4	312.5	326.4
67.5°	171.0	196.3	251.1	291.2	305.1
70°	139.9	171.8	228.2	267.5	281.4
72.5°	111.3	148.1	206.1	243.0	255.2
75°	85.9	125.2	181.6	215.1	220.1
77.5°	63.0	102.3	156.2	167.7	168.5
80°	42.5	81.8	119.4	117.8	119.4
82.5°	27.8	61.4	75.3	84.3	85.1
85°	16.4	36.0	44.2	49.1	49.9
87.5°	8.2	12.3	15.5	16.4	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)