

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: P309818

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CA08-W2A-U-4000K**

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: P309818
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 4000K 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: 1884.0 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

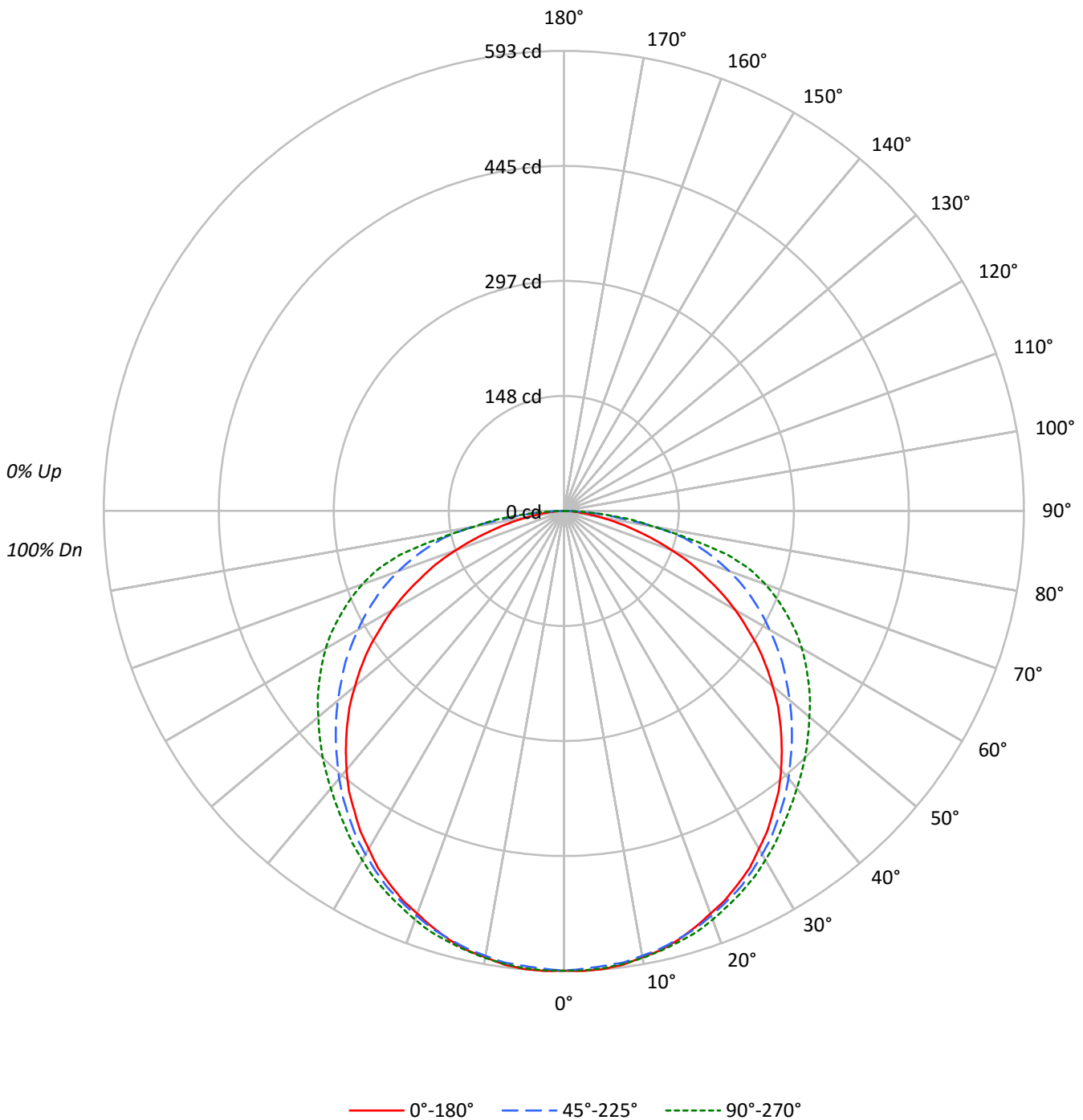
Input Watts (W): 21.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	797	797	797
5°	800	795	799
10°	798	795	799
15°	797	795	801
20°	791	795	803
25°	788	796	805
30°	781	794	807
35°	774	792	810
40°	765	791	821
45°	752	791	839
50°	736	796	864
55°	717	809	903
60°	686	825	953
65°	642	854	1011
70°	585	893	1088
75°	495	943	1137
80°	391	948	920
85°	289	721	807



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.2	3.0
10°-20°	161.7	8.6
20°-30°	247.3	13.1
30°-40°	302.4	16.0
40°-50°	322.3	17.1
50°-60°	308.1	16.4
60°-70°	261.0	13.9
70°-80°	175.4	9.3
80°-90°	49.5	2.6
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°	465.3	24.7
0°-40°	767.7	40.7
0°-60°	1398.1	74.2
0°-90°	1884.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1884.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	592	592	589	592	592	56
15°	572	572	571	576	575	161
25°	531	533	536	541	542	245
35°	471	475	482	492	493	295
45°	395	402	416	434	441	305
55°	306	317	345	372	385	272
65°	202	222	268	304	318	200
75°	95	130	181	212	219	102
85°	19	38	47	50	52	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	592.5	592.5	592.5	592.5	592.5
2.5°	593.4	593.4	590.6	592.5	592.5
5°	592.5	591.5	588.7	591.5	591.5
7.5°	589.7	588.7	586.9	589.7	588.7
10°	584.1	584.1	582.2	585.0	585.0
12.5°	579.4	578.4	577.5	581.3	580.3
15°	571.9	571.9	571.0	575.6	574.7
17.5°	562.6	563.5	564.4	568.2	569.1
20°	552.3	554.2	555.1	560.7	560.7
22.5°	542.9	543.9	545.7	551.3	551.3
25°	530.8	532.7	536.4	541.1	542.0
27.5°	518.6	519.6	524.2	530.8	531.7
30°	502.8	505.6	511.2	518.6	519.6
32.5°	488.7	491.5	498.1	505.6	507.4
35°	471.0	474.7	482.2	491.5	493.4
37.5°	455.1	457.9	467.2	477.5	480.3
40°	435.5	441.1	450.4	462.6	467.2
42.5°	415.8	421.5	432.7	448.6	454.2
45°	395.3	401.8	415.8	433.6	441.1
47.5°	374.7	382.2	398.1	418.6	427.1
50°	351.4	360.7	380.3	403.7	413.0
52.5°	328.9	340.2	361.6	387.8	400.0
55°	305.6	316.8	344.8	371.9	385.0
57.5°	279.4	294.4	325.2	356.0	370.1
60°	255.1	269.1	306.5	340.2	354.2
62.5°	228.9	247.6	287.8	323.3	337.3
65°	201.8	222.4	268.2	303.7	317.7
67.5°	177.6	200.0	248.6	284.1	298.1
70°	148.6	176.6	227.1	262.6	276.6
72.5°	121.5	152.3	204.7	239.2	252.3
75°	95.3	129.9	181.3	212.1	218.7
77.5°	71.0	107.5	157.0	170.1	165.4
80°	50.5	86.0	122.4	115.9	118.7
82.5°	32.7	65.4	75.7	86.0	88.8
85°	18.7	38.3	46.7	50.5	52.3
87.5°	8.4	14.0	18.7	18.7	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)