

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: P307073

Luminaire Tested: **14FCZ2-29-UNV-L82765-HRP-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: P307073
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L82765-HRP-CA08-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 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: 2122.0 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

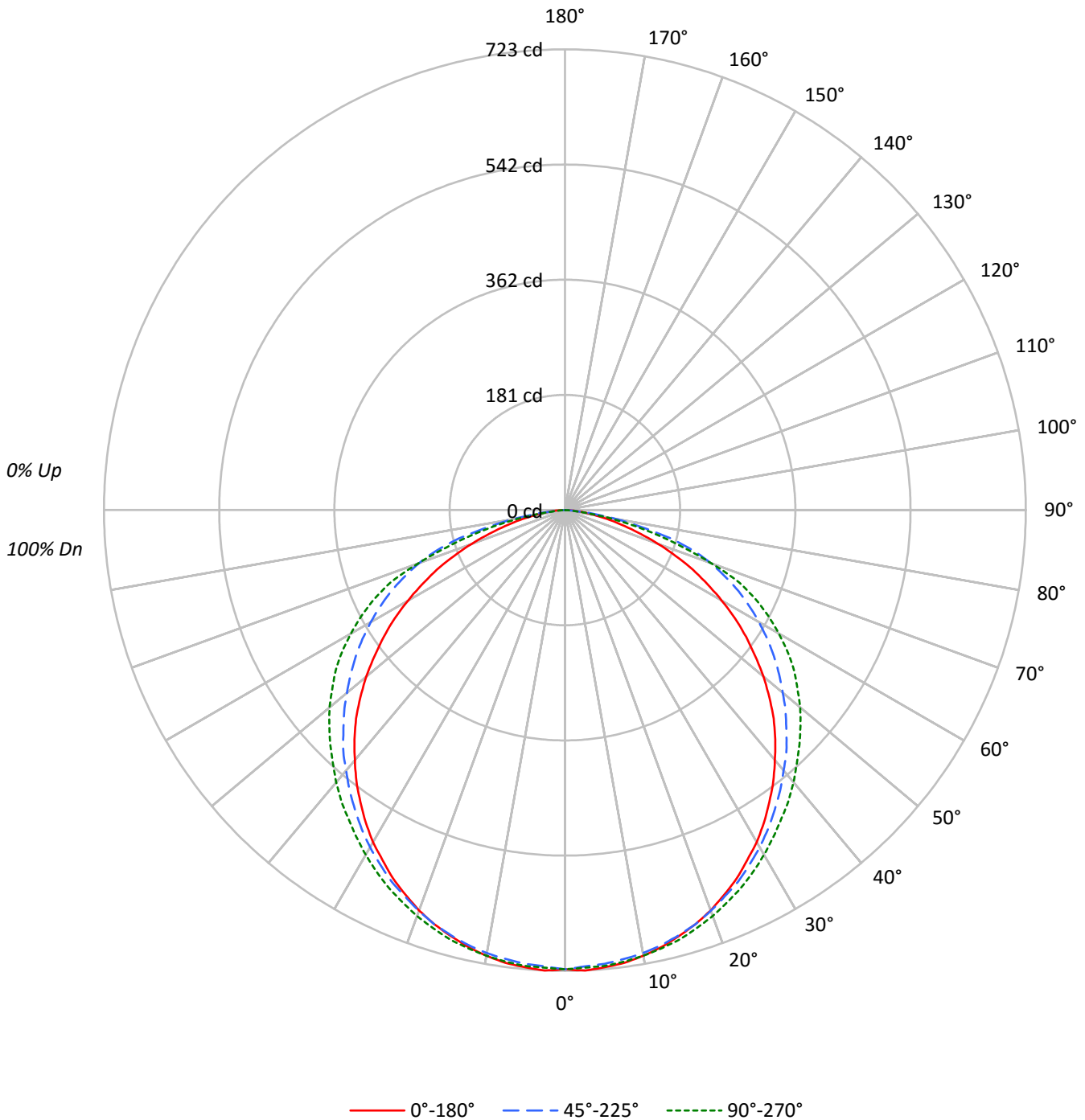
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1939	1939	1939
5°	1945	1930	1940
10°	1940	1929	1940
15°	1928	1924	1943
20°	1915	1917	1941
25°	1894	1910	1942
30°	1870	1899	1941
35°	1837	1885	1944
40°	1800	1875	1959
45°	1762	1869	1981
50°	1701	1869	2017
55°	1628	1879	2060
60°	1530	1892	2087
65°	1410	1912	2099
70°	1228	1917	1932
75°	1013	1783	1561
80°	797	1282	1044
85°	618	494	247



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	3.2
10°-20°	195.8	9.2
20°-30°	297.3	14.0
30°-40°	360.2	17.0
40°-50°	379.6	17.9
50°-60°	354.4	16.7
60°-70°	283.2	13.3
70°-80°	155.8	7.3
80°-90°	27.5	1.3
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°	561.3	26.5
0°-40°	921.5	43.4
0°-60°	1655.5	78.0
0°-90°	2122.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2122.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	721	721	721	721	721	
5°	720	718	715	719	718	68
15°	692	692	691	697	697	195
25°	638	639	643	653	654	294
35°	559	564	574	588	592	350
45°	463	472	491	513	520	356
55°	347	364	400	428	439	310
65°	222	250	300	325	330	218
75°	97	140	172	154	150	105
85°	20	25	16	10	8	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	720.6	720.6	720.6	720.6	720.6
2.5°	723.3	721.3	716.6	720.6	718.6
5°	720.0	718.0	714.6	719.3	718.0
7.5°	716.6	714.0	710.6	716.0	714.6
10°	710.0	708.0	706.0	710.6	710.0
12.5°	702.0	701.3	699.3	704.6	704.0
15°	691.9	691.9	690.6	697.3	697.3
17.5°	681.3	680.6	681.3	688.6	687.9
20°	668.6	668.6	669.3	677.9	677.9
22.5°	653.2	653.9	655.9	666.6	665.9
25°	637.9	639.2	643.2	652.6	653.9
27.5°	619.2	622.6	627.2	638.6	639.9
30°	601.9	603.9	611.2	621.9	624.6
32.5°	581.2	585.2	593.2	605.2	608.5
35°	559.2	564.5	573.8	588.5	591.9
37.5°	537.1	541.8	554.5	569.8	575.8
40°	512.5	520.5	533.8	551.2	557.8
42.5°	488.4	496.4	514.5	532.5	538.5
45°	463.1	471.8	491.1	513.1	520.5
47.5°	435.1	445.1	469.8	493.1	501.1
50°	406.4	419.0	446.4	472.4	481.8
52.5°	376.3	392.3	423.7	451.1	459.7
55°	347.0	364.3	400.4	428.4	439.1
57.5°	316.9	335.6	376.3	408.4	414.4
60°	284.3	306.9	351.6	379.7	387.7
62.5°	252.2	278.2	326.3	353.0	359.7
65°	221.5	249.6	300.3	325.0	329.6
67.5°	188.2	221.5	271.6	294.3	295.6
70°	156.1	194.8	243.6	254.2	245.6
72.5°	124.8	166.1	210.9	202.2	194.8
75°	97.4	139.5	171.5	154.1	150.1
77.5°	72.1	114.1	122.8	113.4	106.1
80°	51.4	90.1	82.7	70.7	67.4
82.5°	35.4	56.7	45.4	35.4	30.7
85°	20.0	25.4	16.0	10.0	8.0
87.5°	8.7	6.0	3.3	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)