

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: P309957

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CA08-W2A-U-5700K**

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: P309957
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: 24FCZ2-35-UNV-L82765-RDP-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 5700K 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: 2280.0 lumens
Efficiency: N/A
Efficacy: 79.2 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

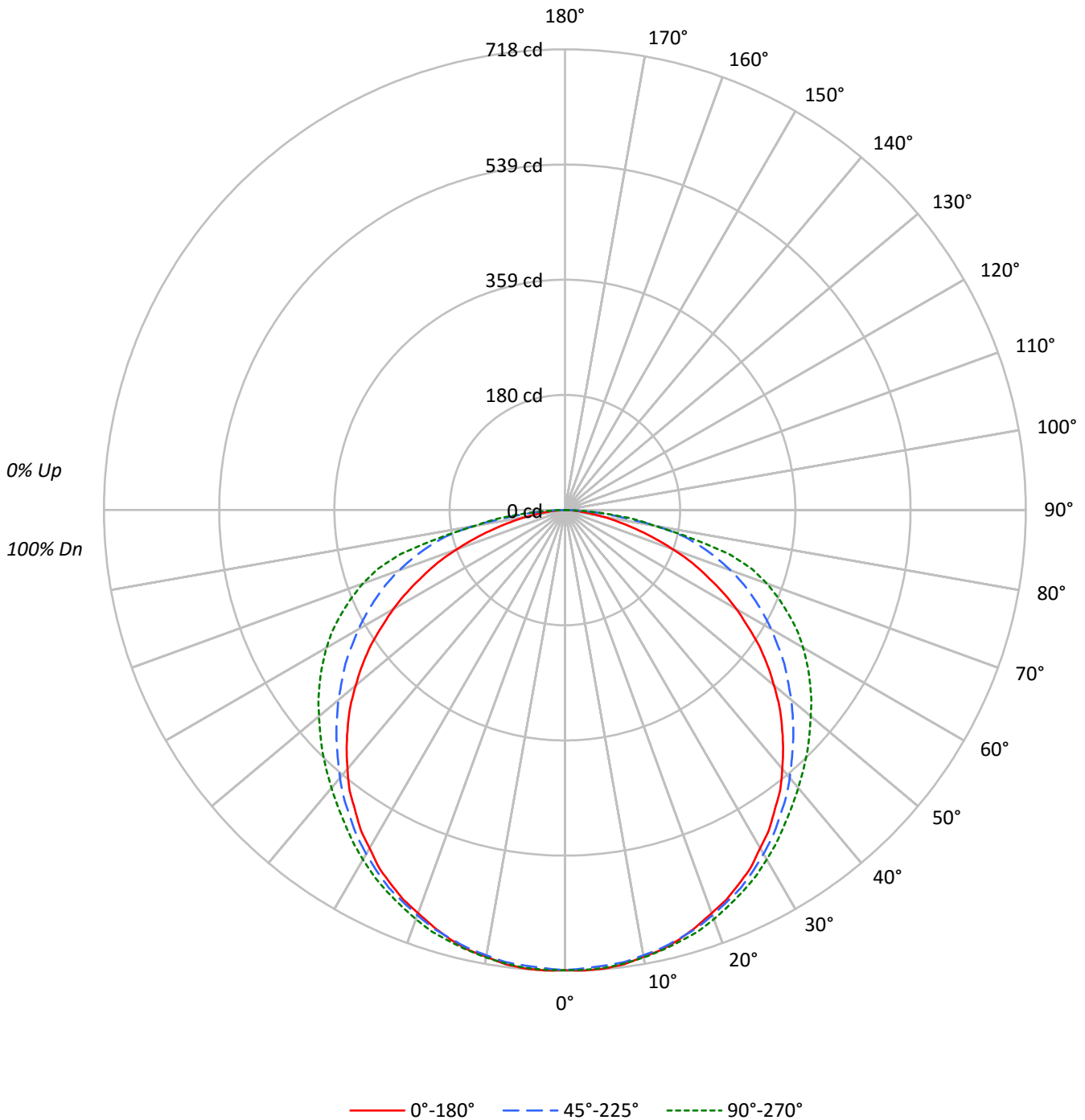
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	965	965	965
5°	968	962	967
10°	966	963	967
15°	964	963	969
20°	957	962	972
25°	954	964	974
30°	945	961	977
35°	936	958	981
40°	926	957	993
45°	910	958	1016
50°	890	964	1046
55°	867	979	1093
60°	831	998	1153
65°	778	1033	1224
70°	707	1081	1317
75°	600	1141	1376
80°	473	1148	1113
85°	349	872	977



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	3.0
10°-20°	195.7	8.6
20°-30°	299.3	13.1
30°-40°	365.9	16.0
40°-50°	390.0	17.1
50°-60°	372.9	16.4
60°-70°	315.9	13.9
70°-80°	212.3	9.3
80°-90°	59.9	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°	563.1	24.7
0°-40°	929.0	40.7
0°-60°	1691.9	74.2
0°-90°	2280.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2280.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	717	717	717	717	717	
5°	717	716	712	716	716	68
15°	692	692	691	697	696	195
25°	642	645	649	655	656	296
35°	570	574	584	595	597	357
45°	478	486	503	525	534	369
55°	370	383	417	450	466	329
65°	244	269	325	368	384	243
75°	115	157	219	257	265	124
85°	23	46	56	61	63	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	717.0	717.0	717.0	717.0	717.0
2.5°	718.1	718.1	714.7	717.0	717.0
5°	717.0	715.9	712.5	715.9	715.9
7.5°	713.6	712.5	710.2	713.6	712.5
10°	706.8	706.8	704.6	707.9	707.9
12.5°	701.2	700.0	698.9	703.4	702.3
15°	692.1	692.1	691.0	696.6	695.5
17.5°	680.8	681.9	683.1	687.6	688.7
20°	668.4	670.6	671.8	678.5	678.5
22.5°	657.1	658.2	660.4	667.2	667.2
25°	642.4	644.6	649.1	654.8	655.9
27.5°	627.7	628.8	634.4	642.4	643.5
30°	608.4	611.8	618.6	627.7	628.8
32.5°	591.5	594.9	602.8	611.8	614.1
35°	570.0	574.5	583.5	594.9	597.1
37.5°	550.8	554.1	565.5	577.9	581.3
40°	527.0	533.8	545.1	559.8	565.5
42.5°	503.3	510.0	523.6	542.8	549.6
45°	478.4	486.3	503.3	524.7	533.8
47.5°	453.5	462.5	481.8	506.6	516.8
50°	425.2	436.5	460.3	488.6	499.9
52.5°	398.1	411.7	437.7	469.3	484.0
55°	369.8	383.4	417.3	450.1	465.9
57.5°	338.1	356.2	393.6	430.9	447.8
60°	308.7	325.7	370.9	411.7	428.6
62.5°	277.1	299.7	348.3	391.3	408.3
65°	244.3	269.2	324.6	367.5	384.5
67.5°	214.9	242.0	300.8	343.8	360.8
70°	179.8	213.7	274.8	317.8	334.7
72.5°	147.0	184.3	247.7	289.5	305.3
75°	115.4	157.2	219.4	256.7	264.6
77.5°	85.9	130.1	190.0	205.8	200.2
80°	61.1	104.0	148.1	140.2	143.6
82.5°	39.6	79.2	91.6	104.0	107.4
85°	22.6	46.4	56.5	61.1	63.3
87.5°	10.2	17.0	22.6	22.6	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)