

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: P309280

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-CA08-W2A-U-5000K**

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: P309280
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: 24FCZ2-35-UNV-L82765-HRP-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5000K 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: 2540.0 lumens
Efficiency: N/A
Efficacy: 88.5 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

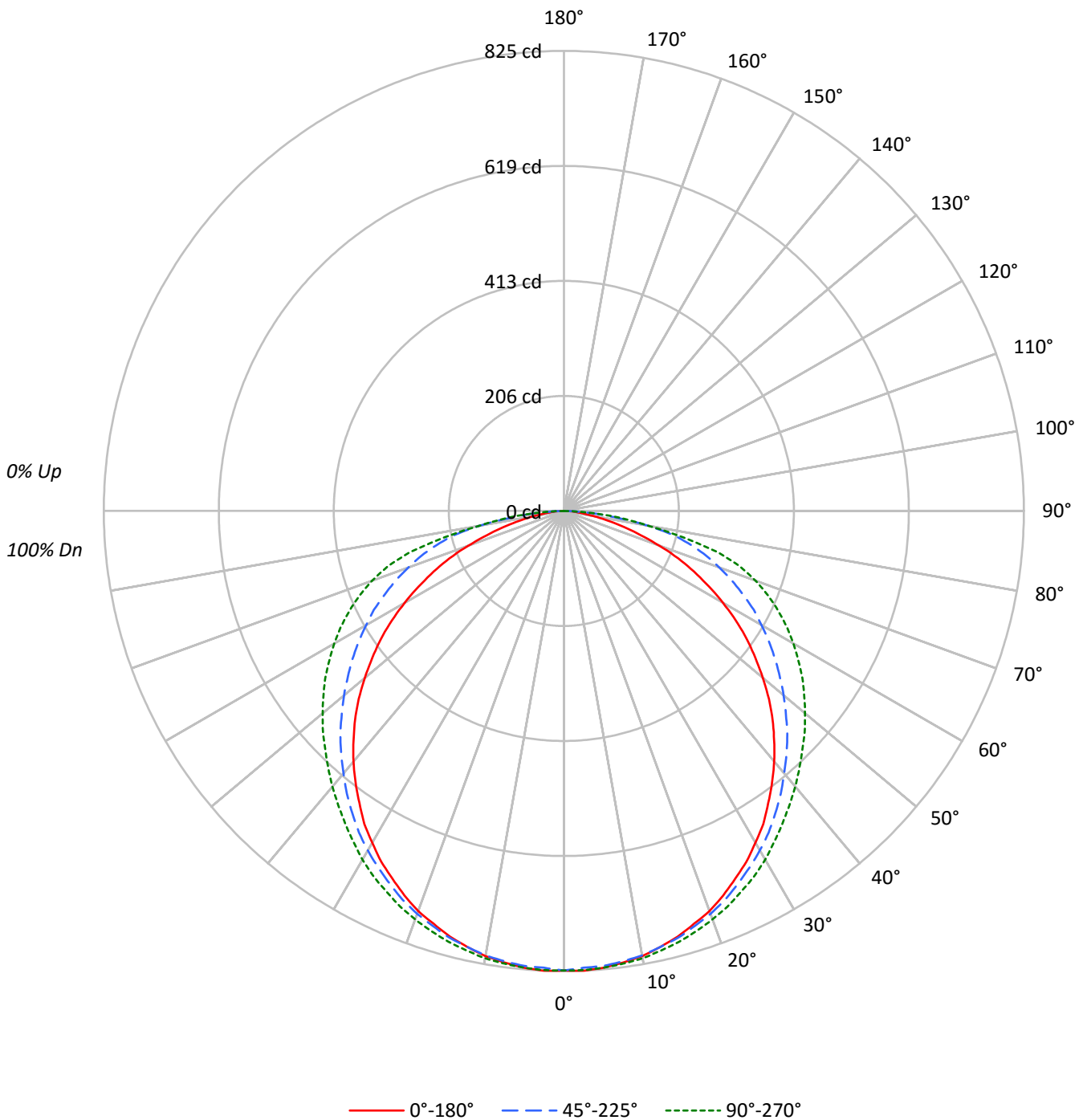
Input Watts (W): 28.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1109	1109	1109
5°	1110	1106	1110
10°	1107	1106	1113
15°	1101	1103	1114
20°	1093	1101	1116
25°	1080	1096	1118
30°	1067	1092	1122
35°	1050	1086	1123
40°	1031	1079	1134
45°	1008	1079	1151
50°	975	1077	1182
55°	940	1085	1225
60°	887	1102	1279
65°	819	1127	1351
70°	715	1167	1439
75°	581	1227	1487
80°	428	1203	1203
85°	329	886	1002



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.1	3.1
10°-20°	224.2	8.8
20°-30°	341.3	13.4
30°-40°	414.4	16.3
40°-50°	437.8	17.2
50°-60°	413.1	16.3
60°-70°	343.5	13.5
70°-80°	226.0	8.9
80°-90°	61.6	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°	643.5	25.3
0°-40°	1058.0	41.7
0°-60°	1908.9	75.2
0°-90°	2540.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2540.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	822	822	819	822	822	78
15°	790	791	792	800	800	223
25°	727	732	738	751	753	336
35°	639	646	661	678	684	400
45°	530	540	567	594	605	408
55°	401	418	463	506	522	357
65°	257	287	354	406	424	254
75°	112	163	236	280	286	120
85°	21	47	57	64	65	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	824.1	824.1	824.1	824.1	824.1
2.5°	825.2	824.1	819.9	824.1	824.1
5°	822.0	822.0	818.8	822.0	822.0
7.5°	816.7	816.7	814.5	818.8	818.8
10°	810.3	810.3	809.2	814.5	814.5
12.5°	800.7	801.8	800.7	807.1	807.1
15°	790.1	791.1	792.2	799.6	799.6
17.5°	776.3	778.4	780.5	789.0	790.1
20°	763.5	764.6	768.8	778.4	779.4
22.5°	746.5	749.7	755.0	764.6	767.7
25°	727.3	731.6	738.0	750.7	752.9
27.5°	709.3	712.5	721.0	734.8	739.0
30°	686.9	692.2	702.9	716.7	722.0
32.5°	665.7	671.0	683.7	698.6	702.9
35°	639.1	646.5	661.4	678.4	683.7
37.5°	613.6	621.0	639.1	658.2	664.6
40°	587.0	595.5	614.6	637.0	645.5
42.5°	558.3	570.0	591.2	615.7	625.3
45°	529.6	540.2	566.8	594.4	605.1
47.5°	498.7	511.5	540.2	573.2	585.9
50°	465.8	481.7	514.7	550.8	564.6
52.5°	432.8	450.9	488.1	528.5	543.4
55°	400.9	417.9	462.6	506.2	522.1
57.5°	365.8	387.1	436.0	482.8	498.7
60°	329.6	353.0	409.4	458.3	475.3
62.5°	293.5	320.1	383.9	432.8	450.9
65°	257.3	287.1	354.1	406.2	424.3
67.5°	222.2	255.2	326.5	378.6	396.6
70°	181.8	223.3	296.7	347.7	365.8
72.5°	144.6	192.5	268.0	315.8	331.8
75°	111.7	162.7	236.1	279.7	286.0
77.5°	81.9	132.9	203.1	218.0	219.1
80°	55.3	106.3	155.3	153.1	155.3
82.5°	36.2	79.8	97.8	109.5	110.6
85°	21.3	46.8	57.4	63.8	64.9
87.5°	10.6	16.0	20.2	21.3	23.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)