

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: P313121

Luminaire Tested: **24FCZ2-35-UNV-L83050-HRP-CA125-W2A-U-3500K**

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: P313121
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-L83050-HRP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2517.0 lumens
Efficiency: N/A
Efficacy: 89.9 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

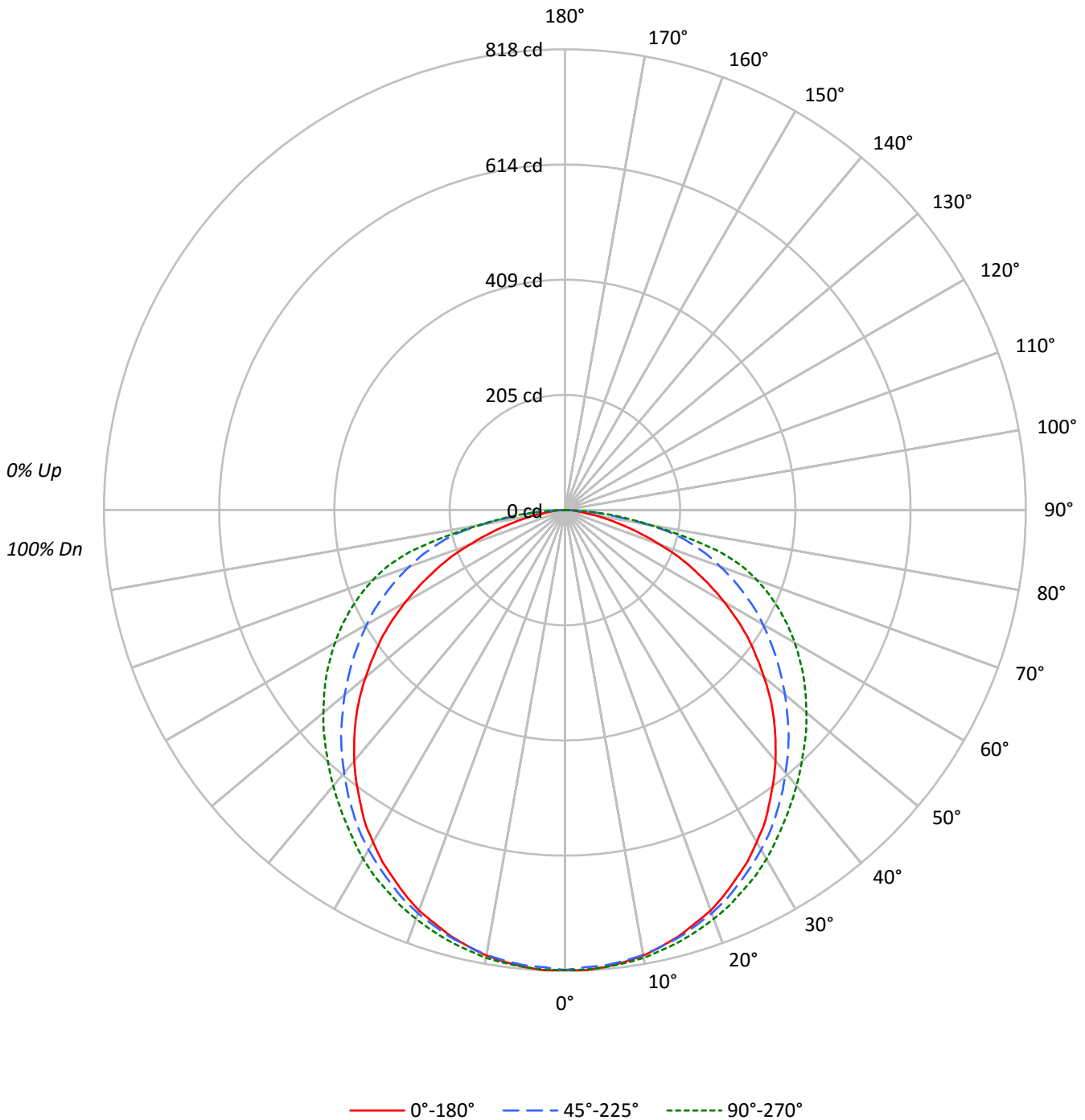
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1099	1099	1099
5°	1100	1096	1100
10°	1097	1096	1103
15°	1091	1093	1104
20°	1083	1091	1106
25°	1070	1086	1107
30°	1058	1082	1112
35°	1040	1077	1113
40°	1022	1070	1123
45°	999	1069	1141
50°	966	1068	1171
55°	932	1075	1214
60°	879	1092	1267
65°	812	1117	1338
70°	709	1157	1426
75°	575	1216	1474
80°	425	1192	1192
85°	326	878	993



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	3.1
10°-20°	222.2	8.8
20°-30°	338.2	13.4
30°-40°	410.7	16.3
40°-50°	433.9	17.2
50°-60°	409.4	16.3
60°-70°	340.4	13.5
70°-80°	223.9	8.9
80°-90°	61.0	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°	637.7	25.3
0°-40°	1048.4	41.7
0°-60°	1891.6	75.2
0°-90°	2517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2517.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	817	817	817	817	817	
5°	814	814	811	814	814	77
15°	783	784	785	792	792	221
25°	721	725	731	744	746	332
35°	633	641	655	672	678	396
45°	525	535	562	589	600	404
55°	397	414	458	502	517	354
65°	255	284	351	402	420	252
75°	111	161	234	277	284	119
85°	21	46	57	63	64	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	816.6	816.6	816.6	816.6	816.6
2.5°	817.7	816.6	812.4	816.6	816.6
5°	814.5	814.5	811.4	814.5	814.5
7.5°	809.3	809.3	807.2	811.4	811.4
10°	802.9	802.9	801.9	807.2	807.2
12.5°	793.5	794.5	793.5	799.8	799.8
15°	782.9	784.0	785.0	792.4	792.4
17.5°	769.2	771.3	773.4	781.9	782.9
20°	756.6	757.6	761.8	771.3	772.4
22.5°	739.7	742.9	748.2	757.6	760.8
25°	720.8	725.0	731.3	743.9	746.0
27.5°	702.8	706.0	714.4	728.1	732.3
30°	680.7	686.0	696.5	710.2	715.5
32.5°	659.6	664.9	677.5	692.3	696.5
35°	633.3	640.7	655.4	672.3	677.5
37.5°	608.0	615.4	633.3	652.3	658.6
40°	581.7	590.1	609.1	631.2	639.6
42.5°	553.2	564.8	585.9	610.1	619.6
45°	524.8	535.3	561.6	589.0	599.6
47.5°	494.2	506.8	535.3	568.0	580.6
50°	461.5	477.3	510.0	545.8	559.5
52.5°	428.9	446.8	483.7	523.7	538.5
55°	397.3	414.1	458.4	501.6	517.4
57.5°	362.5	383.6	432.0	478.4	494.2
60°	326.7	349.8	405.7	454.2	471.0
62.5°	290.8	317.2	380.4	428.9	446.8
65°	255.0	284.5	350.9	402.5	420.4
67.5°	220.2	252.9	323.5	375.1	393.0
70°	180.2	221.3	294.0	344.6	362.5
72.5°	143.3	190.7	265.5	313.0	328.8
75°	110.6	161.2	233.9	277.1	283.5
77.5°	81.1	131.7	201.3	216.0	217.1
80°	54.8	105.4	153.8	151.7	153.8
82.5°	35.8	79.0	96.9	108.5	109.6
85°	21.1	46.4	56.9	63.2	64.3
87.5°	10.5	15.8	20.0	21.1	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)