

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: P313095

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-3000K**

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: P313095
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: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3000K 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: 2353.0 lumens
Efficiency: N/A
Efficacy: 90.8 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

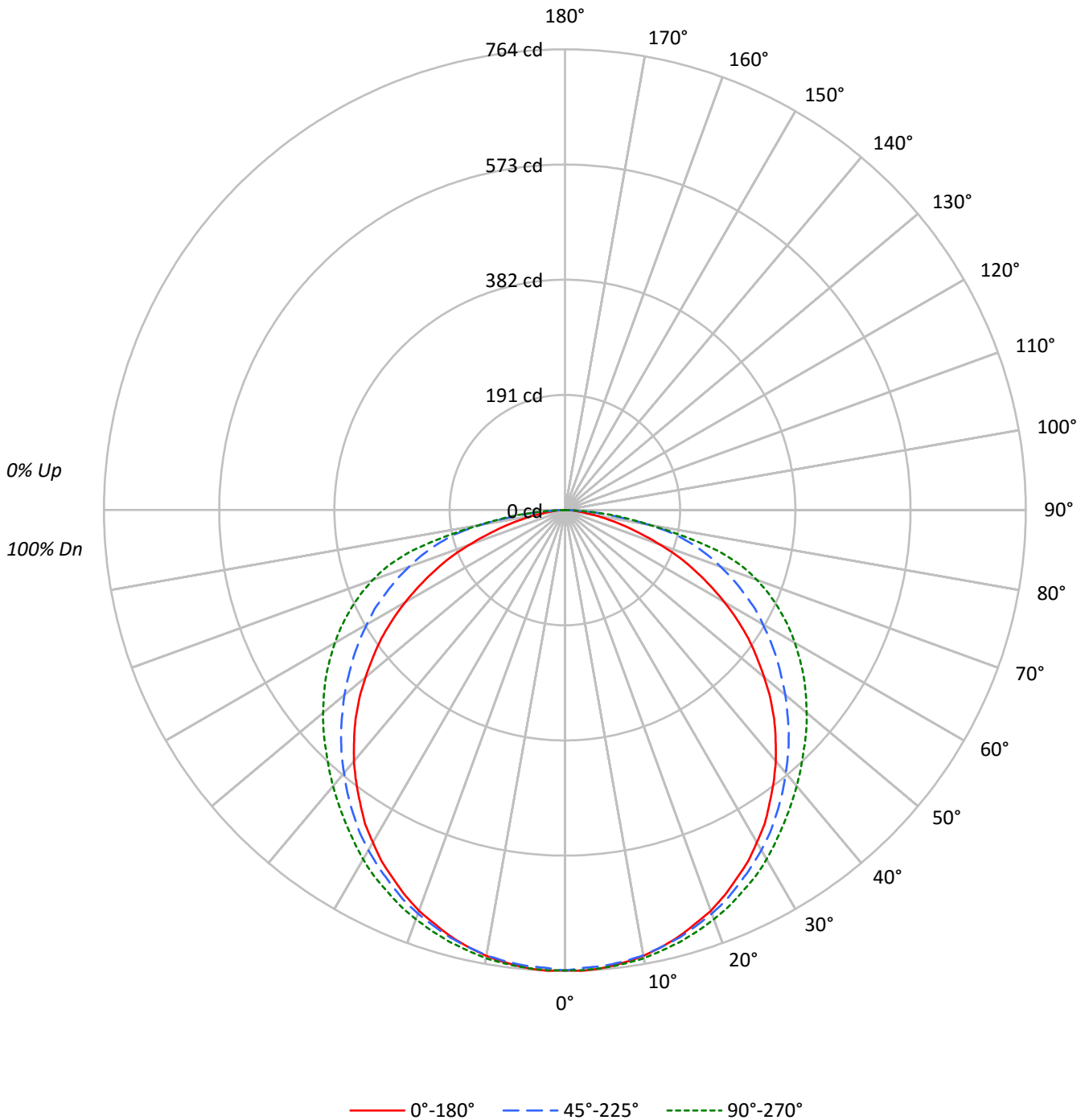
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1027	1027	1027
5°	1029	1024	1029
10°	1026	1024	1031
15°	1020	1022	1032
20°	1013	1020	1034
25°	1000	1015	1035
30°	989	1012	1039
35°	972	1006	1040
40°	955	1000	1050
45°	934	999	1067
50°	903	998	1095
55°	871	1005	1135
60°	822	1021	1185
65°	759	1044	1251
70°	662	1081	1333
75°	538	1137	1378
80°	397	1114	1114
85°	304	821	928



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	3.1
10°-20°	207.7	8.8
20°-30°	316.2	13.4
30°-40°	383.9	16.3
40°-50°	405.6	17.2
50°-60°	382.7	16.3
60°-70°	318.2	13.5
70°-80°	209.3	8.9
80°-90°	57.1	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°	596.2	25.3
0°-40°	980.1	41.7
0°-60°	1768.4	75.2
0°-90°	2353.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2353.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	763	763	763	763	763	
5°	762	762	758	762	762	72
15°	732	733	734	741	741	206
25°	674	678	684	696	697	311
35°	592	599	613	628	633	371
45°	491	500	525	551	560	378
55°	371	387	428	469	484	331
65°	238	266	328	376	393	236
75°	103	151	219	259	265	111
85°	20	43	53	59	60	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	763.4	763.4	763.4	763.4	763.4
2.5°	764.4	763.4	759.5	763.4	763.4
5°	761.5	761.5	758.5	761.5	761.5
7.5°	756.5	756.5	754.6	758.5	758.5
10°	750.6	750.6	749.6	754.6	754.6
12.5°	741.8	742.7	741.8	747.7	747.7
15°	731.9	732.9	733.9	740.8	740.8
17.5°	719.1	721.1	723.0	730.9	731.9
20°	707.3	708.3	712.2	721.1	722.1
22.5°	691.5	694.5	699.4	708.3	711.2
25°	673.8	677.7	683.6	695.5	697.4
27.5°	657.0	660.0	667.9	680.7	684.6
30°	636.4	641.3	651.1	663.9	668.9
32.5°	616.7	621.6	633.4	647.2	651.1
35°	592.0	598.9	612.7	628.5	633.4
37.5°	568.4	575.3	592.0	609.8	615.7
40°	543.8	551.6	569.4	590.1	597.9
42.5°	517.2	528.0	547.7	570.4	579.2
45°	490.6	500.4	525.0	550.7	560.5
47.5°	462.0	473.8	500.4	531.0	542.8
50°	431.5	446.2	476.8	510.3	523.1
52.5°	400.9	417.7	452.1	489.6	503.4
55°	371.4	387.1	428.5	468.9	483.7
57.5°	338.9	358.6	403.9	447.2	462.0
60°	305.4	327.0	379.3	424.6	440.3
62.5°	271.9	296.5	355.6	400.9	417.7
65°	238.4	266.0	328.0	376.3	393.0
67.5°	205.9	236.4	302.4	350.7	367.4
70°	168.4	206.9	274.8	322.1	338.9
72.5°	134.0	178.3	248.2	292.6	307.3
75°	103.4	150.7	218.7	259.1	265.0
77.5°	75.9	123.1	188.1	201.9	202.9
80°	51.2	98.5	143.8	141.9	143.8
82.5°	33.5	73.9	90.6	101.5	102.4
85°	19.7	43.3	53.2	59.1	60.1
87.5°	9.9	14.8	18.7	19.7	21.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)