

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: P313096

Luminaire Tested: **24FCZ2-35HE-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: P313096
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-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 2490.0 lumens
Efficiency: N/A
Efficacy: 95.8 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

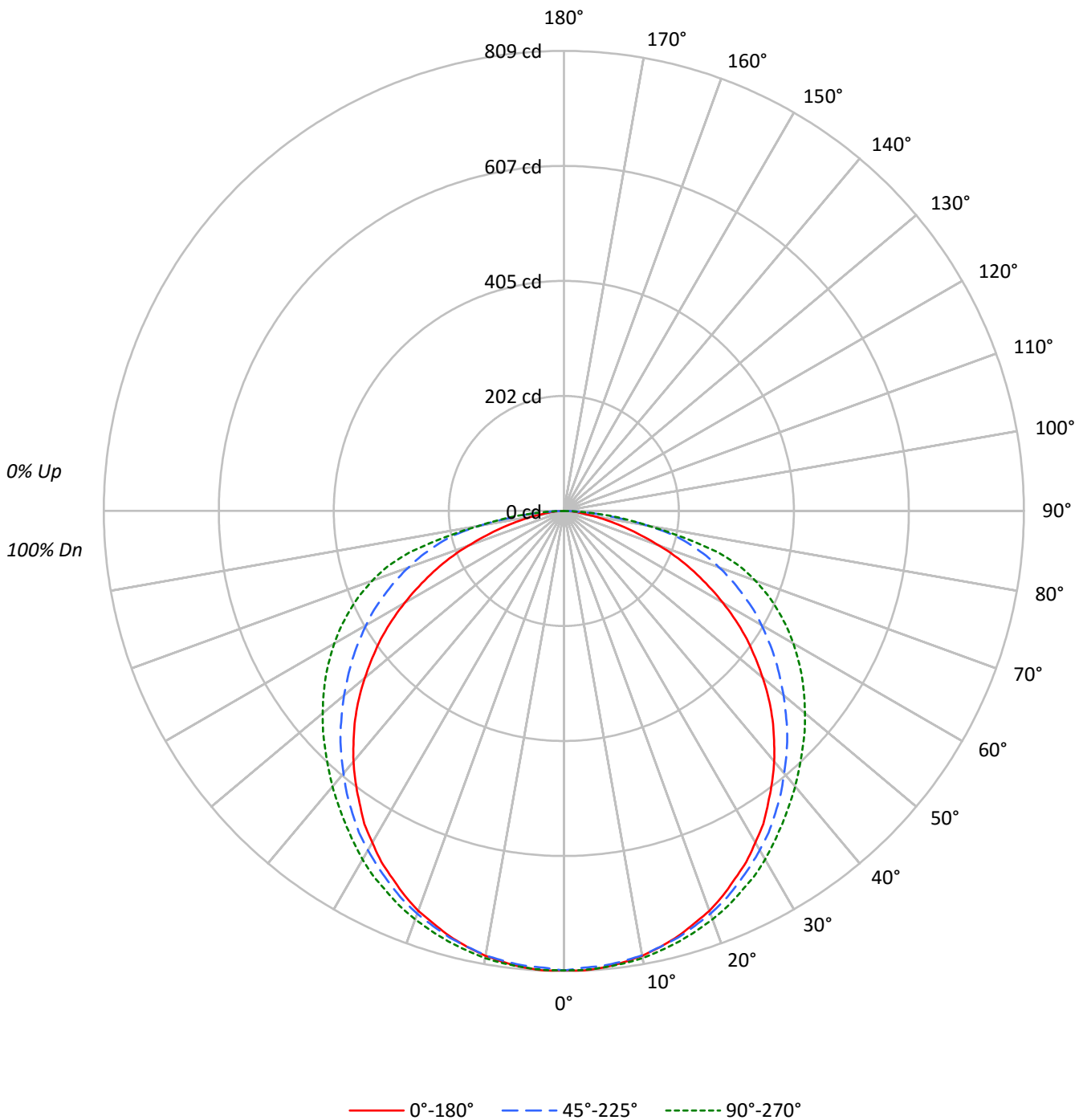
Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313096

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P313096

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-3500K

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°	1087	1087	1087
5°	1088	1084	1088
10°	1085	1084	1091
15°	1079	1082	1092
20°	1072	1079	1094
25°	1059	1074	1096
30°	1046	1070	1100
35°	1029	1065	1101
40°	1011	1058	1111
45°	988	1057	1129
50°	956	1056	1159
55°	922	1064	1201
60°	870	1080	1254
65°	803	1105	1324
70°	701	1144	1411
75°	569	1203	1458
80°	420	1179	1179
85°	321	869	982



TEST NUMBER: P313096

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.5	3.1
10°-20°	219.8	8.8
20°-30°	334.6	13.4
30°-40°	406.3	16.3
40°-50°	429.2	17.2
50°-60°	405.0	16.3
60°-70°	336.7	13.5
70°-80°	221.5	8.9
80°-90°	60.4	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°	630.9	25.3
0°-40°	1037.1	41.7
0°-60°	1871.3	75.2
0°-90°	2490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	808	808	808	808	808	
5°	806	806	803	806	806	77
15°	774	776	777	784	784	218
25°	713	717	723	736	738	329
35°	626	634	648	665	670	392
45°	519	530	556	583	593	400
55°	393	410	454	496	512	350
65°	252	282	347	398	416	249
75°	110	160	231	274	280	118
85°	21	46	56	62	64	25
90°	0	0	0	0	0	



TEST NUMBER: P313096

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	807.9	807.9	807.9	807.9	807.9
2.5°	808.9	807.9	803.7	807.9	807.9
5°	805.8	805.8	802.7	805.8	805.8
7.5°	800.6	800.6	798.5	802.7	802.7
10°	794.3	794.3	793.3	798.5	798.5
12.5°	784.9	786.0	784.9	791.2	791.2
15°	774.5	775.6	776.6	783.9	783.9
17.5°	761.0	763.1	765.1	773.5	774.5
20°	748.5	749.5	753.7	763.1	764.1
22.5°	731.8	734.9	740.1	749.5	752.6
25°	713.0	717.2	723.4	736.0	738.0
27.5°	695.3	698.4	706.8	720.3	724.5
30°	673.4	678.6	689.0	702.6	707.8
32.5°	652.6	657.8	670.3	684.9	689.0
35°	626.5	633.8	648.4	665.1	670.3
37.5°	601.5	608.8	626.5	645.3	651.5
40°	575.4	583.8	602.5	624.4	632.8
42.5°	547.3	558.7	579.6	603.6	612.9
45°	519.1	529.6	555.6	582.7	593.1
47.5°	488.9	501.4	529.6	561.9	574.4
50°	456.6	472.2	504.5	540.0	553.5
52.5°	424.3	442.0	478.5	518.1	532.7
55°	393.0	409.7	453.5	496.2	511.8
57.5°	358.6	379.4	427.4	473.3	488.9
60°	323.2	346.1	401.3	449.3	466.0
62.5°	287.7	313.8	376.3	424.3	442.0
65°	252.3	281.5	347.1	398.2	415.9
67.5°	217.9	250.2	320.0	371.1	388.8
70°	178.3	218.9	290.8	340.9	358.6
72.5°	141.8	188.7	262.7	309.6	325.2
75°	109.5	159.5	231.4	274.2	280.4
77.5°	80.3	130.3	199.1	213.7	214.7
80°	54.2	104.2	152.2	150.1	152.2
82.5°	35.4	78.2	95.9	107.4	108.4
85°	20.8	45.9	56.3	62.5	63.6
87.5°	10.4	15.6	19.8	20.8	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)