

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: P313478

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CP125-W2A-U-4500K**

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: P313478
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: 24FCZ2-35HE-UNV-L83050-RDP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 2241.0 lumens
Efficiency: N/A
Efficacy: 82.1 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

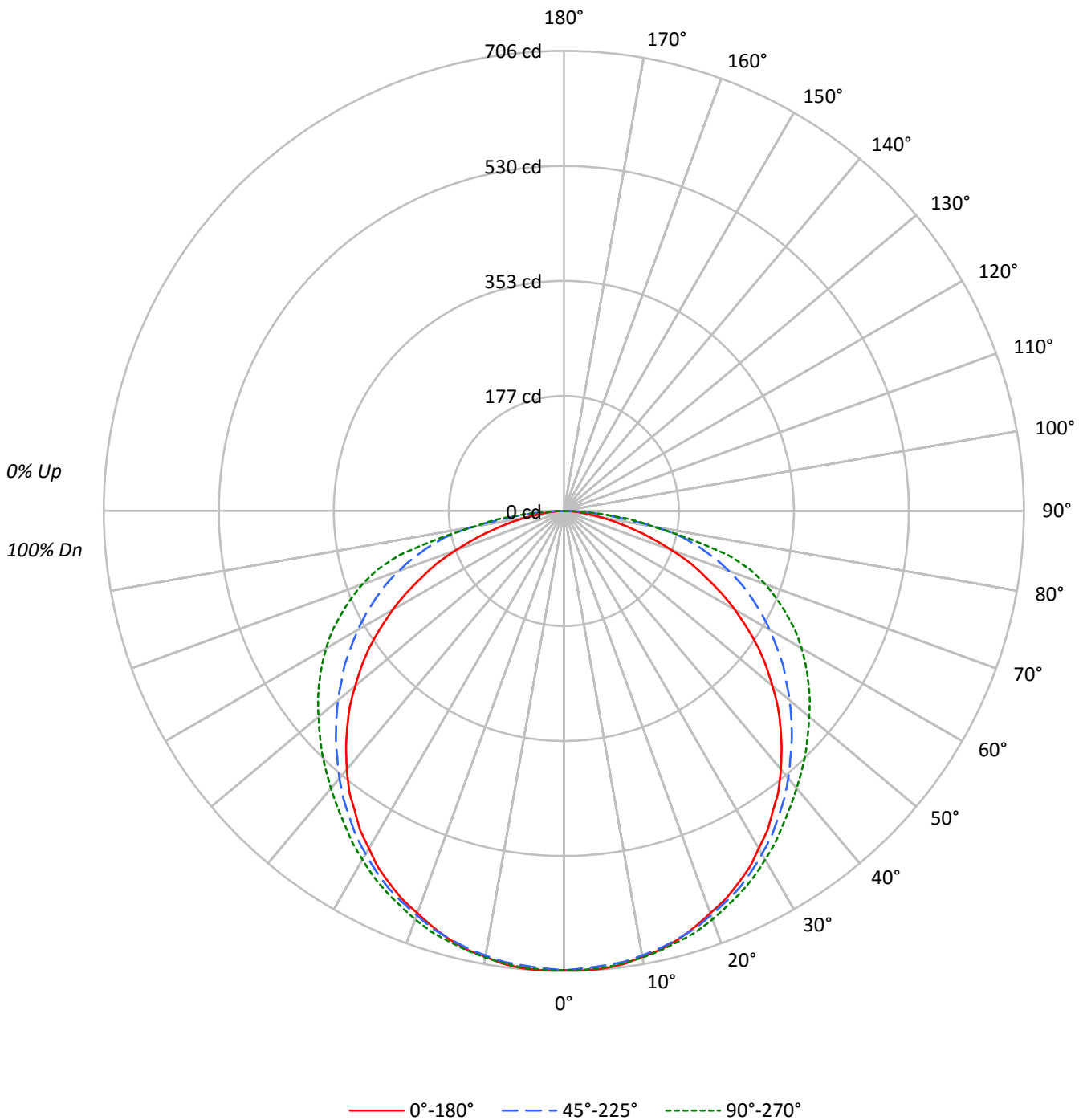
Input Watts (W): 27.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313478

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-RDP-CP125-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P313478

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-RDP-CP125-W2A-U-4500K

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°	948	948	948
5°	952	946	950
10°	949	946	951
15°	948	946	952
20°	941	945	955
25°	937	947	957
30°	929	945	960
35°	920	942	964
40°	910	941	976
45°	895	941	998
50°	875	947	1028
55°	853	962	1074
60°	817	981	1134
65°	764	1016	1203
70°	695	1063	1294
75°	590	1121	1352
80°	465	1128	1094
85°	343	858	960



TEST NUMBER: P313478

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-RDP-CP125-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	3.0
10°-20°	192.4	8.6
20°-30°	294.2	13.1
30°-40°	359.7	16.0
40°-50°	383.3	17.1
50°-60°	366.5	16.4
60°-70°	310.5	13.9
70°-80°	208.7	9.3
80°-90°	58.9	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°	553.5	24.7
0°-40°	913.1	40.7
0°-60°	1663.0	74.2
0°-90°	2241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2241.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	705	705	705	705	705	
5°	705	704	700	704	704	67
15°	680	680	679	685	684	192
25°	631	634	638	644	645	291
35°	560	565	574	585	587	351
45°	470	478	495	516	525	363
55°	364	377	410	442	458	324
65°	240	265	319	361	378	238
75°	113	154	216	252	260	121
85°	22	46	56	60	62	27
90°	0	0	0	0	0	



TEST NUMBER: P313478

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-RDP-CP125-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	704.7	704.7	704.7	704.7	704.7
2.5°	705.8	705.8	702.5	704.7	704.7
5°	704.7	703.6	700.3	703.6	703.6
7.5°	701.4	700.3	698.1	701.4	700.3
10°	694.7	694.7	692.5	695.8	695.8
12.5°	689.2	688.1	686.9	691.4	690.3
15°	680.3	680.3	679.2	684.7	683.6
17.5°	669.2	670.3	671.4	675.8	676.9
20°	656.9	659.2	660.3	666.9	666.9
22.5°	645.8	646.9	649.2	655.8	655.8
25°	631.4	633.6	638.0	643.6	644.7
27.5°	616.9	618.0	623.6	631.4	632.5
30°	598.0	601.4	608.0	616.9	618.0
32.5°	581.3	584.7	592.5	601.4	603.6
35°	560.2	564.7	573.6	584.7	586.9
37.5°	541.3	544.7	555.8	568.0	571.3
40°	518.0	524.7	535.8	550.2	555.8
42.5°	494.6	501.3	514.7	533.5	540.2
45°	470.2	478.0	494.6	515.8	524.7
47.5°	445.7	454.6	473.5	498.0	508.0
50°	417.9	429.1	452.4	480.2	491.3
52.5°	391.3	404.6	430.2	461.3	475.7
55°	363.5	376.8	410.2	442.4	458.0
57.5°	332.4	350.1	386.8	423.5	440.2
60°	303.5	320.1	364.6	404.6	421.3
62.5°	272.3	294.6	342.4	384.6	401.3
65°	240.1	264.6	319.0	361.3	377.9
67.5°	211.2	237.9	295.7	337.9	354.6
70°	176.7	210.1	270.1	312.3	329.0
72.5°	144.5	181.2	243.4	284.6	300.1
75°	113.4	154.5	215.6	252.3	260.1
77.5°	84.5	127.8	186.7	202.3	196.7
80°	60.0	102.3	145.6	137.8	141.2
82.5°	38.9	77.8	90.0	102.3	105.6
85°	22.2	45.6	55.6	60.0	62.2
87.5°	10.0	16.7	22.2	22.2	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)