

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: P314285

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-CP250-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: P314285
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L83050-S-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 3432.0 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

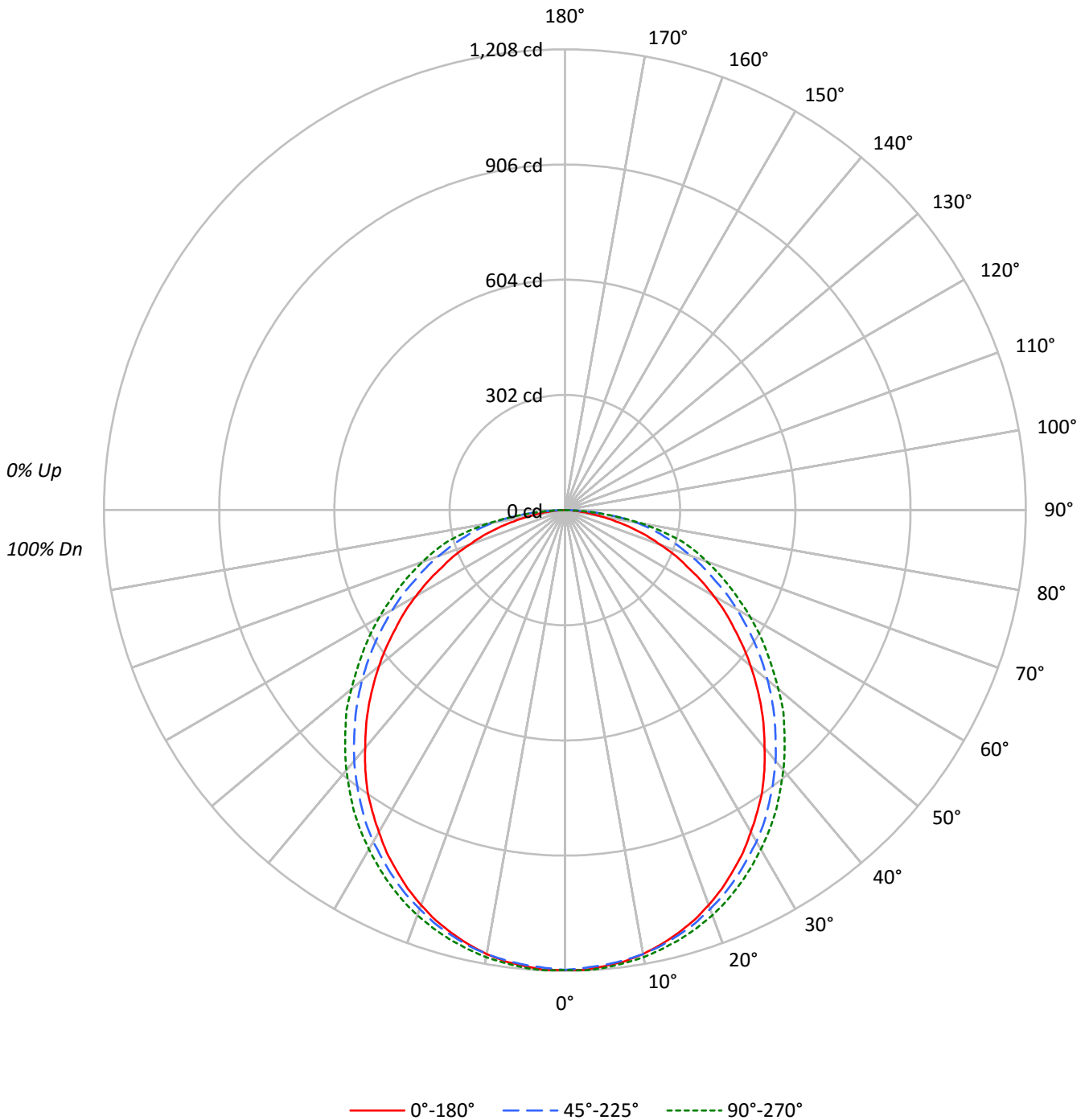
Input Watts (W): 30.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314285

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP250-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P314285

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP250-W2A-U-3000K

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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1622	1622	1622
5°	1621	1617	1627
10°	1614	1614	1626
15°	1599	1607	1623
20°	1578	1594	1619
25°	1549	1578	1609
30°	1514	1560	1595
35°	1481	1534	1583
40°	1430	1509	1564
45°	1384	1479	1547
50°	1330	1451	1529
55°	1271	1424	1514
60°	1211	1402	1511
65°	1135	1378	1520
70°	1051	1385	1561
75°	941	1411	1649
80°	760	1495	1613
85°	573	1312	1278



TEST NUMBER: P314285

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP250-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.1	3.3
10°-20°	326.1	9.5
20°-30°	490.3	14.3
30°-40°	584.0	17.0
40°-50°	597.7	17.4
50°-60°	538.1	15.7
60°-70°	422.6	12.3
70°-80°	274.3	8.0
80°-90°	84.8	2.5
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°	930.6	27.1
0°-40°	1514.5	44.1
0°-60°	2650.3	77.2
0°-90°	3432.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3432.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1206	1206	1206	1206	1206	
5°	1200	1202	1197	1204	1205	114
15°	1148	1151	1153	1163	1165	324
25°	1043	1052	1063	1080	1084	481
35°	902	912	934	957	964	562
45°	727	745	777	807	813	561
55°	542	566	607	639	645	486
65°	356	384	433	469	478	355
75°	181	216	271	308	317	192
85°	37	69	85	83	83	45
90°	0	0	0	0	0	



TEST NUMBER: P314285

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP250-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1205.7	1205.7	1205.7	1205.7	1205.7
2.5°	1206.8	1206.8	1201.3	1206.8	1207.9
5°	1200.2	1202.4	1197.0	1203.5	1204.6
7.5°	1193.7	1193.7	1190.4	1197.0	1198.1
10°	1181.7	1182.8	1181.7	1189.3	1190.4
12.5°	1166.4	1168.6	1169.7	1177.3	1178.4
15°	1147.9	1151.2	1153.4	1163.2	1165.3
17.5°	1127.2	1130.5	1135.9	1146.8	1149.0
20°	1102.1	1106.5	1113.0	1127.2	1130.5
22.5°	1074.9	1079.2	1090.1	1103.2	1108.7
25°	1043.3	1052.0	1062.9	1080.3	1083.6
27.5°	1011.6	1019.3	1033.4	1052.0	1056.3
30°	974.6	986.6	1004.0	1022.5	1026.9
32.5°	938.6	950.6	971.3	990.9	996.4
35°	901.5	912.4	934.2	957.1	963.7
37.5°	859.0	873.2	897.2	920.1	926.6
40°	814.3	831.8	859.0	883.0	890.6
42.5°	771.8	790.3	817.6	843.8	852.5
45°	727.1	744.6	777.3	806.7	813.2
47.5°	681.3	701.0	735.8	765.3	776.2
50°	635.5	656.3	693.3	723.8	730.4
52.5°	589.8	611.6	650.8	683.5	686.8
55°	541.8	565.8	607.2	638.8	645.4
57.5°	498.2	518.9	563.6	596.3	603.9
60°	450.2	473.1	521.1	551.6	561.4
62.5°	404.4	428.4	478.6	509.1	517.8
65°	356.5	383.7	432.8	468.8	477.5
67.5°	315.0	341.2	393.5	428.4	437.1
70°	267.1	296.5	352.1	388.1	396.8
72.5°	225.7	256.2	311.8	346.7	359.7
75°	181.0	215.8	271.4	308.5	317.2
77.5°	137.4	177.7	234.4	262.7	262.7
80°	98.1	140.6	193.0	206.0	208.2
82.5°	64.3	105.7	142.8	141.7	141.7
85°	37.1	68.7	85.0	82.8	82.8
87.5°	14.2	28.3	30.5	30.5	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)