

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: P313311

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-HRP-CP250-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: P313311
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: 24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 3658.0 lumens
Efficiency: N/A
Efficacy: 84.9 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

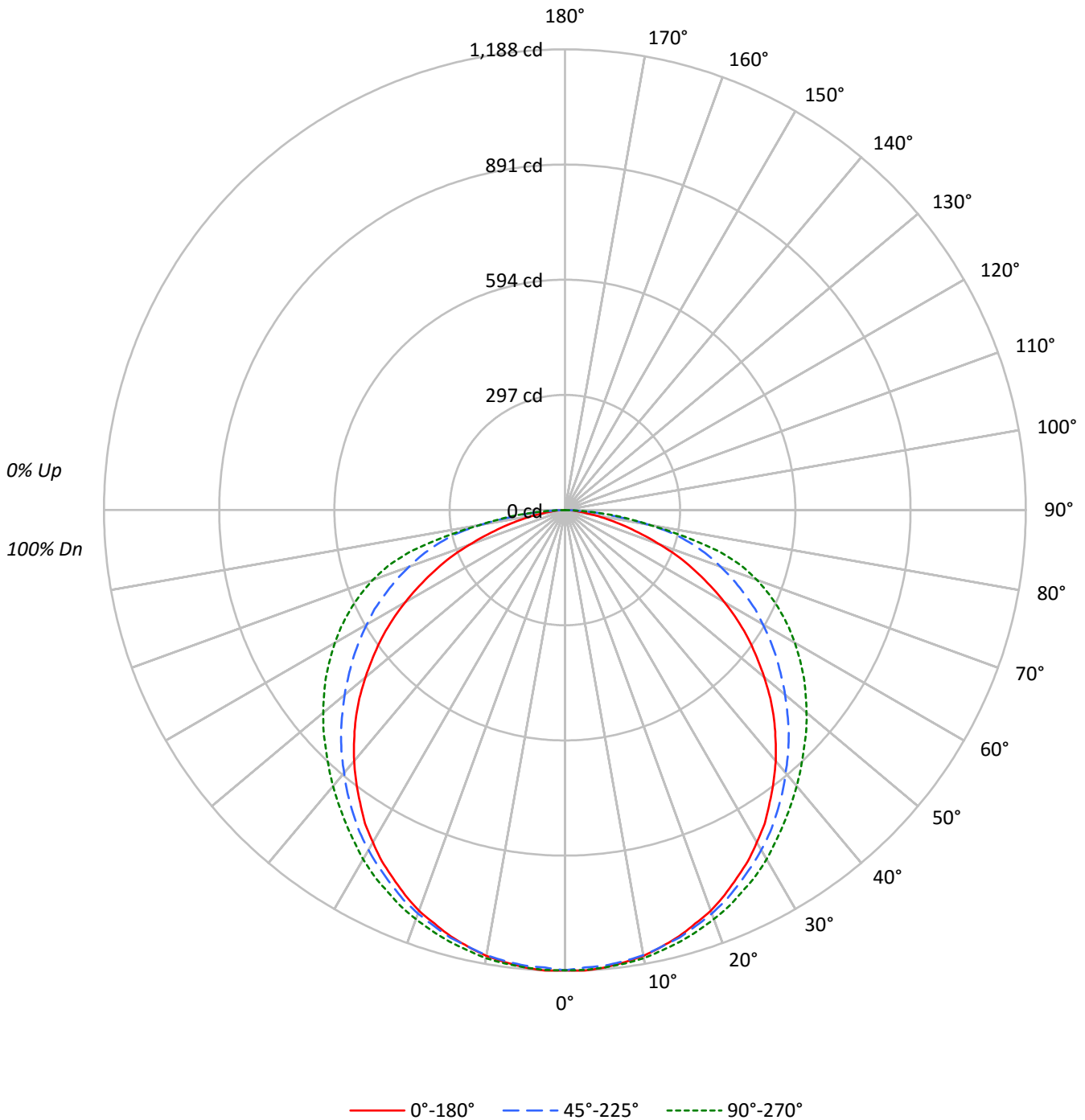
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313311

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P313311

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP250-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°	1597	1597	1597
5°	1599	1593	1599
10°	1594	1592	1603
15°	1585	1589	1604
20°	1574	1585	1607
25°	1555	1578	1610
30°	1537	1573	1615
35°	1512	1565	1617
40°	1485	1555	1633
45°	1451	1553	1658
50°	1404	1551	1702
55°	1354	1563	1764
60°	1277	1587	1842
65°	1180	1624	1945
70°	1030	1681	2072
75°	836	1768	2141
80°	617	1733	1733
85°	472	1277	1442



TEST NUMBER: P313311

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	3.1
10°-20°	322.9	8.8
20°-30°	491.5	13.4
30°-40°	596.8	16.3
40°-50°	630.5	17.2
50°-60°	595.0	16.3
60°-70°	494.7	13.5
70°-80°	325.5	8.9
80°-90°	88.7	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°	926.8	25.3
0°-40°	1523.6	41.7
0°-60°	2749.1	75.2
0°-90°	3658.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3658.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1187	1187	1187	1187	1187	
5°	1184	1184	1179	1184	1184	112
15°	1138	1139	1141	1152	1152	321
25°	1048	1054	1063	1081	1084	483
35°	920	931	952	977	985	576
45°	763	778	816	856	871	587
55°	577	602	666	729	752	514
65°	371	414	510	585	611	366
75°	161	234	340	403	412	173
85°	31	67	83	92	93	37
90°	0	0	0	0	0	



TEST NUMBER: P313311

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP250-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1186.8	1186.8	1186.8	1186.8	1186.8
2.5°	1188.4	1186.8	1180.7	1186.8	1186.8
5°	1183.8	1183.8	1179.2	1183.8	1183.8
7.5°	1176.1	1176.1	1173.1	1179.2	1179.2
10°	1166.9	1166.9	1165.4	1173.1	1173.1
12.5°	1153.1	1154.7	1153.1	1162.3	1162.3
15°	1137.8	1139.4	1140.9	1151.6	1151.6
17.5°	1117.9	1121.0	1124.1	1136.3	1137.8
20°	1099.6	1101.1	1107.2	1121.0	1122.5
22.5°	1075.0	1079.6	1087.3	1101.1	1105.7
25°	1047.5	1053.6	1062.8	1081.2	1084.2
27.5°	1021.4	1026.0	1038.3	1058.2	1064.3
30°	989.3	996.9	1012.3	1032.2	1039.8
32.5°	958.7	966.3	984.7	1006.1	1012.3
35°	920.4	931.1	952.5	977.0	984.7
37.5°	883.6	894.3	920.4	947.9	957.1
40°	845.3	857.6	885.2	917.3	929.6
42.5°	804.0	820.8	851.5	886.7	900.5
45°	762.6	778.0	816.2	856.1	871.4
47.5°	718.2	736.6	778.0	825.4	843.8
50°	670.8	693.7	741.2	793.3	813.2
52.5°	623.3	649.3	702.9	761.1	782.5
55°	577.3	601.8	666.2	729.0	751.9
57.5°	526.8	557.4	627.9	695.3	718.2
60°	474.7	508.4	589.6	660.0	684.5
62.5°	422.7	461.0	552.8	623.3	649.3
65°	370.6	413.5	510.0	585.0	611.0
67.5°	320.1	367.5	470.1	545.2	571.2
70°	261.9	321.6	427.3	500.8	526.8
72.5°	208.3	277.2	385.9	454.8	477.8
75°	160.8	234.3	340.0	402.8	411.9
77.5°	117.9	191.4	292.5	313.9	315.5
80°	79.6	153.1	223.6	220.5	223.6
82.5°	52.1	114.9	140.9	157.7	159.3
85°	30.6	67.4	82.7	91.9	93.4
87.5°	15.3	23.0	29.1	30.6	33.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)