

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: P313735

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-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: P313735
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: 24FCZ2-65HE-UNV-L83050-RDP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 3525.0 lumens
Efficiency: N/A
Efficacy: 67.1 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

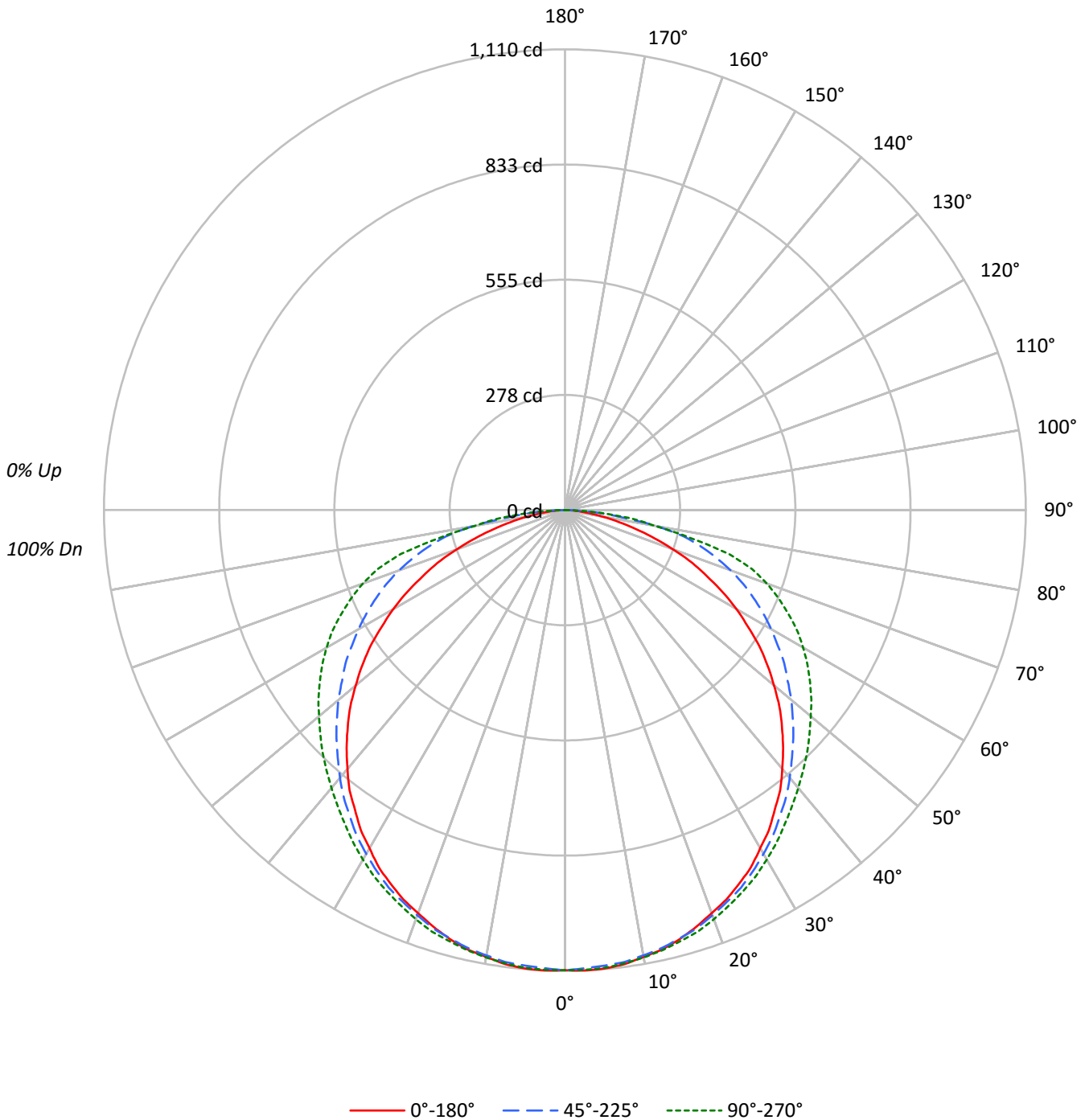
Input Watts (W): 52.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	67	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°	1491	1491	1491
5°	1497	1488	1495
10°	1493	1488	1495
15°	1490	1488	1498
20°	1480	1487	1502
25°	1474	1490	1506
30°	1462	1486	1510
35°	1447	1482	1516
40°	1431	1480	1535
45°	1407	1481	1570
50°	1376	1490	1618
55°	1341	1514	1690
60°	1284	1543	1783
65°	1202	1598	1893
70°	1094	1672	2036
75°	927	1763	2127
80°	731	1774	1721
85°	540	1349	1511



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.2	3.0
10°-20°	302.6	8.6
20°-30°	462.8	13.1
30°-40°	565.7	16.0
40°-50°	603.0	17.1
50°-60°	576.5	16.4
60°-70°	488.4	13.9
70°-80°	328.2	9.3
80°-90°	92.6	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°	870.6	24.7
0°-40°	1436.3	40.7
0°-60°	2615.8	74.2
0°-90°	3525.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3525.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1108	1108	1108	1108	1108	
5°	1108	1107	1102	1107	1107	105
15°	1070	1070	1068	1077	1075	302
25°	993	997	1004	1012	1014	458
35°	881	888	902	920	923	552
45°	740	752	778	811	825	570
55°	572	593	645	696	720	509
65°	378	416	502	568	594	375
75°	178	243	339	397	409	191
85°	35	72	87	94	98	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1108.5	1108.5	1108.5	1108.5	1108.5
2.5°	1110.3	1110.3	1105.0	1108.5	1108.5
5°	1108.5	1106.8	1101.5	1106.8	1106.8
7.5°	1103.3	1101.5	1098.0	1103.3	1101.5
10°	1092.8	1092.8	1089.3	1094.5	1094.5
12.5°	1084.0	1082.3	1080.5	1087.5	1085.8
15°	1070.0	1070.0	1068.3	1077.0	1075.3
17.5°	1052.6	1054.3	1056.1	1063.1	1064.8
20°	1033.3	1036.8	1038.6	1049.1	1049.1
22.5°	1015.8	1017.6	1021.1	1031.6	1031.6
25°	993.1	996.6	1003.6	1012.3	1014.1
27.5°	970.4	972.1	980.9	993.1	994.9
30°	940.7	945.9	956.4	970.4	972.1
32.5°	914.4	919.7	931.9	945.9	949.4
35°	881.2	888.2	902.2	919.7	923.2
37.5°	851.5	856.7	874.2	893.5	898.7
40°	814.8	825.3	842.7	865.5	874.2
42.5°	778.1	788.5	809.5	839.3	849.7
45°	739.6	751.8	778.1	811.3	825.3
47.5°	701.1	715.1	744.8	783.3	799.0
50°	657.4	674.9	711.6	755.3	772.8
52.5°	615.5	636.4	676.6	725.6	748.3
55°	571.7	592.7	645.2	695.9	720.4
57.5°	522.8	550.8	608.5	666.2	692.4
60°	477.3	503.6	573.5	636.4	662.7
62.5°	428.4	463.3	538.5	605.0	631.2
65°	377.7	416.1	501.8	568.2	594.5
67.5°	332.2	374.2	465.1	531.5	557.8
70°	278.0	330.5	424.9	491.3	517.5
72.5°	227.3	285.0	382.9	447.6	472.1
75°	178.3	243.0	339.2	396.9	409.1
77.5°	132.9	201.1	293.7	318.2	309.5
80°	94.4	160.9	229.0	216.8	222.1
82.5°	61.2	122.4	141.6	160.9	166.1
85°	35.0	71.7	87.4	94.4	97.9
87.5°	15.7	26.2	35.0	35.0	33.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)