

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: P310392

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-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: P310392
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-L82765-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: 3522.0 lumens
Efficiency: N/A
Efficacy: 67.5 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

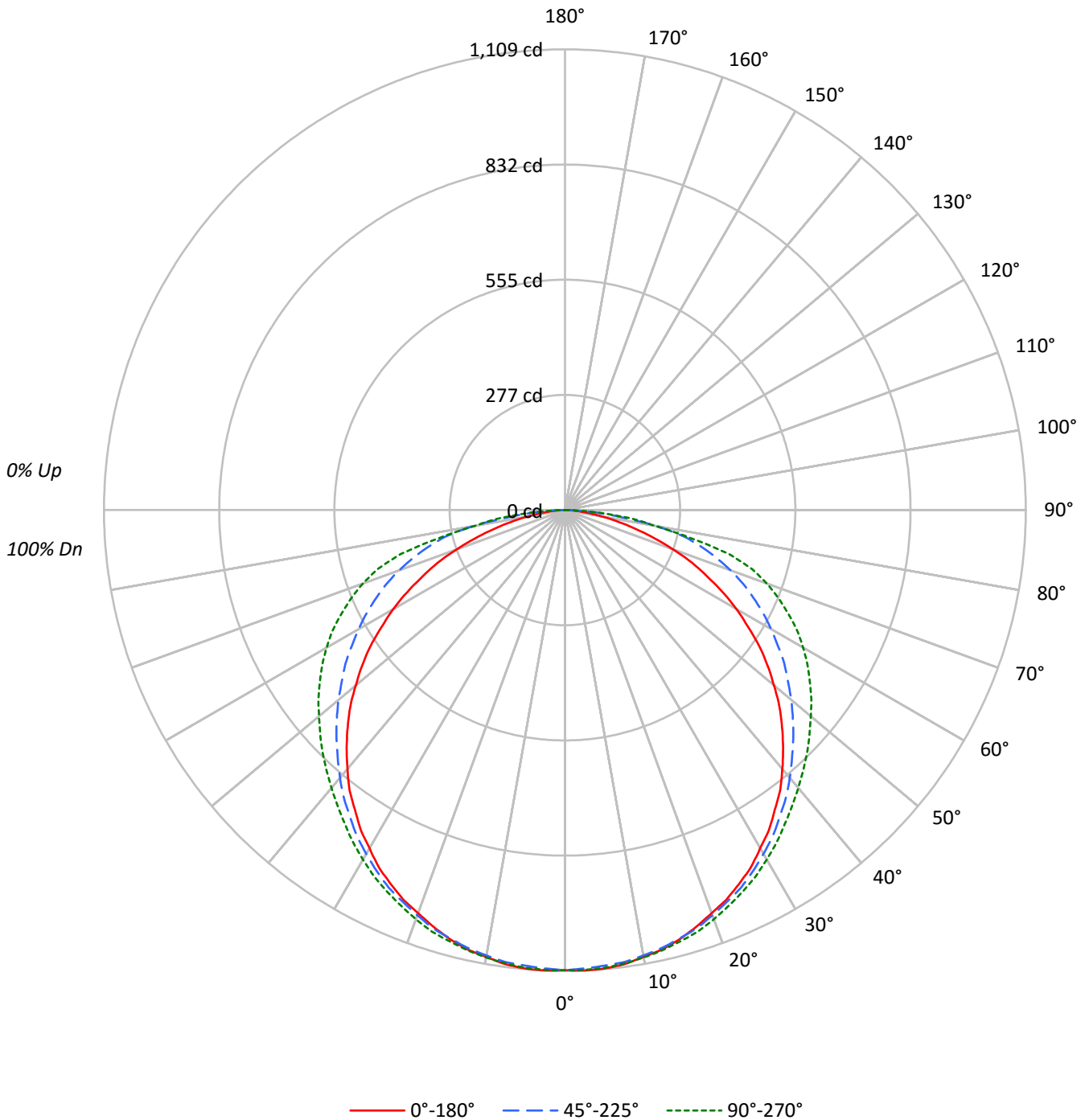
Input Watts (W): 52.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1490	1490	1490
5°	1496	1487	1494
10°	1492	1487	1494
15°	1489	1487	1497
20°	1478	1486	1501
25°	1473	1489	1504
30°	1460	1485	1509
35°	1446	1481	1515
40°	1430	1479	1534
45°	1406	1479	1569
50°	1375	1488	1616
55°	1340	1512	1688
60°	1283	1542	1782
65°	1201	1596	1891
70°	1093	1670	2034
75°	926	1762	2125
80°	731	1774	1719
85°	539	1348	1510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.1	3.0
10°-20°	302.4	8.6
20°-30°	462.4	13.1
30°-40°	565.3	16.0
40°-50°	602.5	17.1
50°-60°	576.0	16.4
60°-70°	488.0	13.9
70°-80°	328.0	9.3
80°-90°	92.5	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°	869.8	24.7
0°-40°	1435.1	40.7
0°-60°	2613.6	74.2
0°-90°	3522.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3522.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1108	1108	1108	1108	1108	
5°	1108	1106	1101	1106	1106	105
15°	1069	1069	1067	1076	1074	301
25°	992	996	1003	1012	1013	457
35°	880	888	901	919	922	552
45°	739	751	777	811	825	570
55°	571	592	645	695	720	509
65°	377	416	501	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°	1107.6	1107.6	1107.6	1107.6	1107.6
2.5°	1109.3	1109.3	1104.1	1107.6	1107.6
5°	1107.6	1105.8	1100.6	1105.8	1105.8
7.5°	1102.3	1100.6	1097.1	1102.3	1100.6
10°	1091.8	1091.8	1088.4	1093.6	1093.6
12.5°	1083.1	1081.4	1079.6	1086.6	1084.9
15°	1069.1	1069.1	1067.4	1076.1	1074.4
17.5°	1051.7	1053.4	1055.2	1062.1	1063.9
20°	1032.4	1035.9	1037.7	1048.2	1048.2
22.5°	1015.0	1016.7	1020.2	1030.7	1030.7
25°	992.3	995.8	1002.8	1011.5	1013.2
27.5°	969.6	971.3	980.0	992.3	994.0
30°	939.9	945.1	955.6	969.6	971.3
32.5°	913.7	918.9	931.1	945.1	948.6
35°	880.5	887.5	901.4	918.9	922.4
37.5°	850.8	856.0	873.5	892.7	897.9
40°	814.1	824.6	842.0	864.7	873.5
42.5°	777.4	787.9	808.8	838.5	849.0
45°	739.0	751.2	777.4	810.6	824.6
47.5°	700.5	714.5	744.2	782.6	798.4
50°	656.9	674.3	711.0	754.7	772.2
52.5°	614.9	635.9	676.1	725.0	747.7
55°	571.3	592.2	644.6	695.3	719.7
57.5°	522.3	550.3	607.9	665.6	691.8
60°	476.9	503.1	573.0	635.9	662.1
62.5°	428.0	462.9	538.1	604.4	630.7
65°	377.3	415.8	501.4	567.8	594.0
67.5°	331.9	373.8	464.7	531.1	557.3
70°	277.8	330.2	424.5	490.9	517.1
72.5°	227.1	284.8	382.6	447.2	471.7
75°	178.2	242.8	338.9	396.6	408.8
77.5°	132.8	200.9	293.5	317.9	309.2
80°	94.3	160.7	228.9	216.6	221.9
82.5°	61.1	122.3	141.5	160.7	166.0
85°	34.9	71.6	87.3	94.3	97.8
87.5°	15.7	26.2	34.9	34.9	33.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)