

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: P310359

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CA08-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: P310359  
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-CA08-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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**

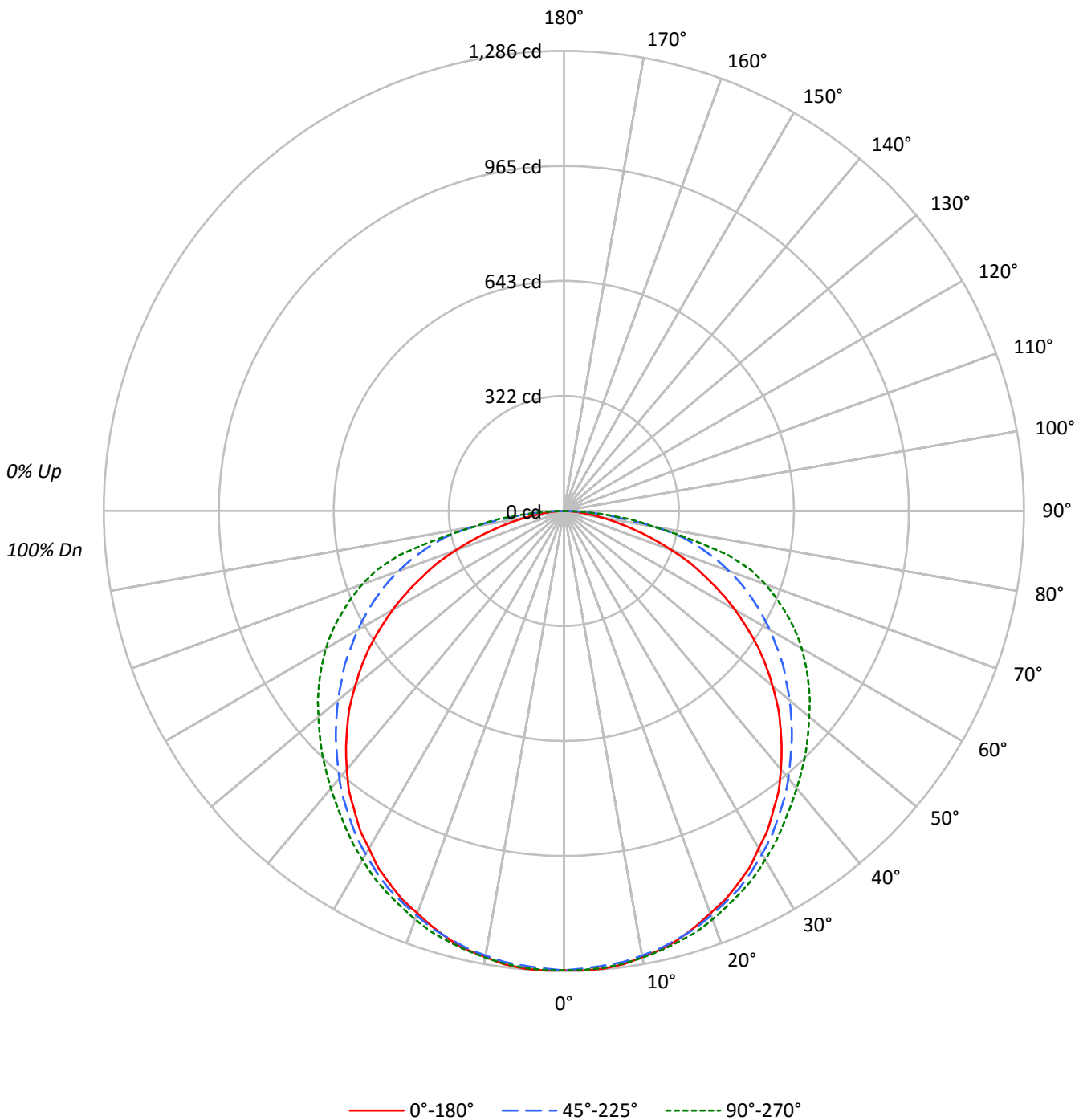
Lumens per Lamp: N/A  
Luminaire Lumens: 4083.0 lumens  
Efficiency: N/A  
Efficacy: 76.2 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 53.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1728	1728	1728
5°	1734	1723	1732
10°	1729	1724	1732
15°	1726	1724	1735
20°	1714	1723	1740
25°	1708	1726	1744
30°	1693	1721	1749
35°	1677	1716	1756
40°	1658	1715	1779
45°	1630	1715	1819
50°	1594	1725	1874
55°	1553	1753	1957
60°	1488	1788	2066
65°	1393	1850	2192
70°	1267	1936	2358
75°	1074	2043	2464
80°	848	2056	1993
85°	625	1564	1751



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.8	3.0
10°-20°	350.5	8.6
20°-30°	536.0	13.1
30°-40°	655.3	16.0
40°-50°	698.4	17.1
50°-60°	667.8	16.4
60°-70°	565.7	13.9
70°-80°	380.2	9.3
80°-90°	107.2	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°	1008.4	24.7
0°-40°	1663.7	40.7
0°-60°	3029.9	74.2
0°-90°	4083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4083.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1284	1284	1284	1284	1284	
5°	1284	1282	1276	1282	1282	122
15°	1239	1239	1237	1248	1246	349
25°	1150	1154	1162	1173	1175	530
35°	1021	1029	1045	1065	1069	639
45°	857	871	901	940	956	661
55°	662	686	747	806	834	590
65°	437	482	581	658	689	434
75°	207	282	393	460	474	221
85°	40	83	101	109	113	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1284.0	1284.0	1284.0	1284.0	1284.0
2.5°	1286.0	1286.0	1279.9	1284.0	1284.0
5°	1284.0	1282.0	1275.9	1282.0	1282.0
7.5°	1277.9	1275.9	1271.8	1277.9	1275.9
10°	1265.8	1265.8	1261.7	1267.8	1267.8
12.5°	1255.6	1253.6	1251.6	1259.7	1257.7
15°	1239.4	1239.4	1237.4	1247.5	1245.5
17.5°	1219.2	1221.2	1223.2	1231.3	1233.4
20°	1196.9	1201.0	1203.0	1215.1	1215.1
22.5°	1176.7	1178.7	1182.7	1194.9	1194.9
25°	1150.3	1154.4	1162.5	1172.6	1174.6
27.5°	1124.0	1126.0	1136.1	1150.3	1152.3
30°	1089.6	1095.6	1107.8	1124.0	1126.0
32.5°	1059.2	1065.3	1079.4	1095.6	1099.7
35°	1020.7	1028.8	1045.0	1065.3	1069.3
37.5°	986.3	992.4	1012.6	1034.9	1041.0
40°	943.8	955.9	976.2	1002.5	1012.6
42.5°	901.2	913.4	937.7	972.1	984.3
45°	856.7	870.8	901.2	939.7	955.9
47.5°	812.1	828.3	862.7	907.3	925.5
50°	761.5	781.7	824.3	874.9	895.1
52.5°	712.9	737.2	783.8	840.5	866.8
55°	662.2	686.5	747.3	806.0	834.4
57.5°	605.5	637.9	704.8	771.6	802.0
60°	552.9	583.3	664.3	737.2	767.6
62.5°	496.2	536.7	623.8	700.7	731.1
65°	437.4	482.0	581.2	658.2	688.6
67.5°	384.8	433.4	538.7	615.7	646.0
70°	322.0	382.8	492.1	569.1	599.5
72.5°	263.3	330.1	443.5	518.5	546.8
75°	206.6	281.5	392.9	459.7	473.9
77.5°	153.9	232.9	340.2	368.6	358.5
80°	109.4	186.3	265.3	251.1	257.2
82.5°	70.9	141.8	164.0	186.3	192.4
85°	40.5	83.0	101.3	109.4	113.4
87.5°	18.2	30.4	40.5	40.5	38.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)