

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: P314102

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-CP125-W2A-U-4000K**

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: P314102  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
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-CP125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 4000K 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**

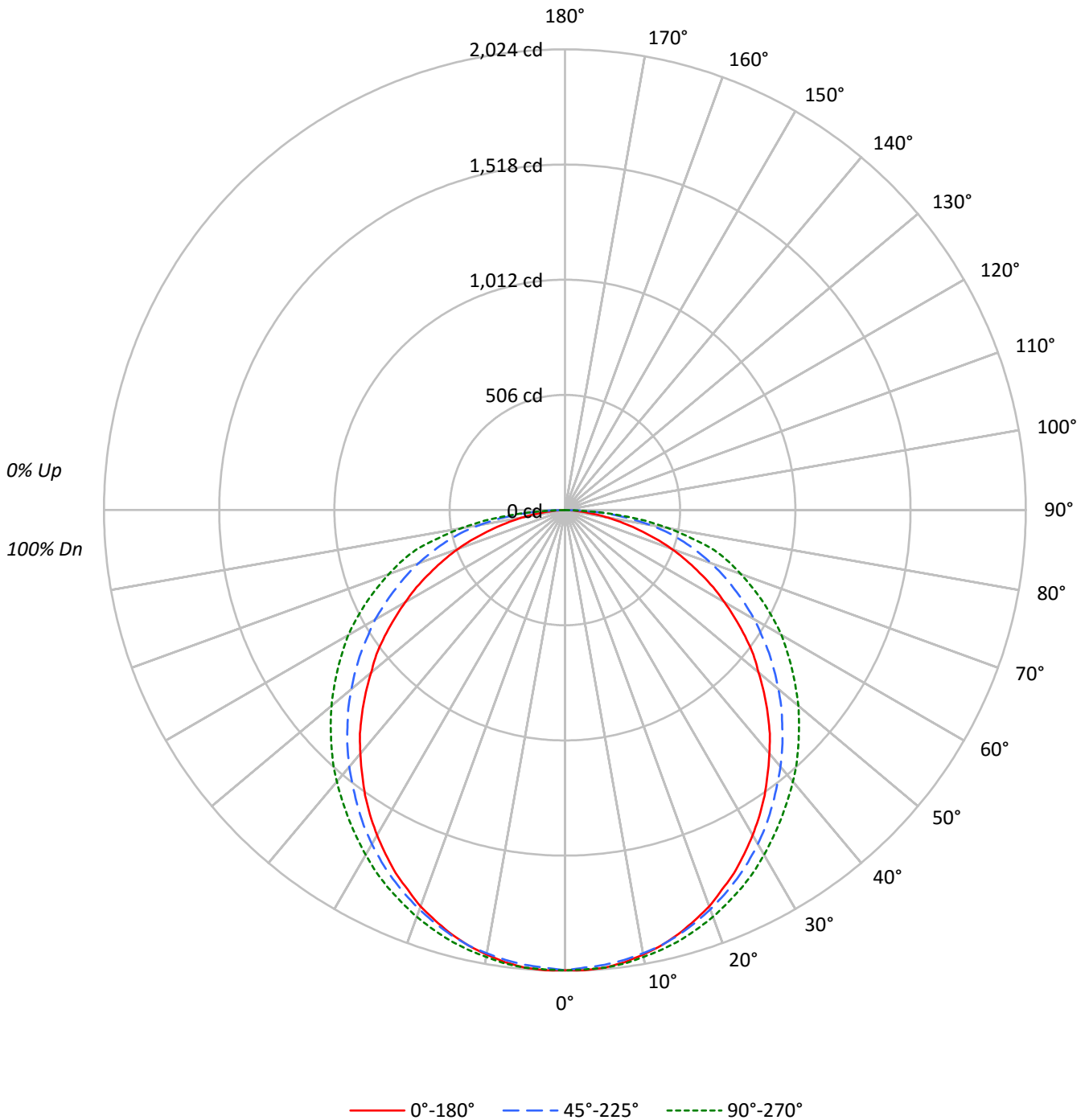
Lumens per Lamp: N/A  
Luminaire Lumens: 6130.0 lumens  
Efficiency: N/A  
Efficacy: 113.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2720	2720	2720
5°	2725	2709	2725
10°	2709	2701	2723
15°	2686	2691	2725
20°	2653	2673	2723
25°	2612	2654	2720
30°	2563	2632	2717
35°	2512	2606	2719
40°	2454	2586	2736
45°	2395	2570	2759
50°	2325	2563	2801
55°	2266	2567	2858
60°	2178	2589	2956
65°	2079	2616	3063
70°	1968	2696	3233
75°	1755	2812	3531
80°	1497	2978	3608
85°	1068	2952	3453



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	191.3	3.1
10°-20°	547.1	8.9
20°-30°	826.3	13.5
30°-40°	995.9	16.2
40°-50°	1045.5	17.1
50°-60°	978.1	16.0
60°-70°	807.7	13.2
70°-80°	550.4	9.0
80°-90°	187.7	3.1
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°	1564.7	25.5
0°-40°	2560.5	41.8
0°-60°	4584.1	74.8
0°-90°	6130.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6130.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2022	2022	2022	2022	2022	
5°	2018	2016	2005	2018	2018	191
15°	1928	1930	1932	1952	1956	543
25°	1759	1767	1788	1822	1832	809
35°	1529	1546	1586	1639	1656	956
45°	1259	1285	1350	1424	1450	971
55°	966	1005	1094	1184	1218	862
65°	653	708	822	925	962	648
75°	338	415	541	643	679	360
85°	69	136	191	216	224	87
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2021.6	2021.6	2021.6	2021.6	2021.6
2.5°	2023.7	2021.6	2011.5	2021.6	2019.6
5°	2017.6	2015.5	2005.4	2017.6	2017.6
7.5°	2003.3	2003.3	1993.1	2007.4	2009.4
10°	1983.0	1983.0	1976.9	1993.1	1993.1
12.5°	1958.6	1958.6	1958.6	1974.8	1976.9
15°	1928.1	1930.1	1932.1	1952.5	1956.5
17.5°	1891.5	1895.5	1901.6	1926.0	1930.1
20°	1852.8	1856.9	1867.1	1895.5	1901.6
22.5°	1804.0	1814.2	1828.4	1860.9	1867.1
25°	1759.3	1767.4	1787.7	1822.3	1832.5
27.5°	1704.3	1716.5	1743.0	1779.6	1793.8
30°	1649.4	1661.6	1694.2	1736.9	1749.1
32.5°	1590.5	1608.8	1643.3	1688.1	1702.3
35°	1529.4	1545.7	1586.4	1639.3	1655.5
37.5°	1462.3	1484.7	1529.4	1586.4	1606.7
40°	1397.2	1421.6	1472.5	1533.5	1557.9
42.5°	1332.2	1356.6	1413.5	1482.7	1507.1
45°	1258.9	1285.4	1350.5	1423.7	1450.1
47.5°	1185.7	1218.3	1289.4	1366.7	1395.2
50°	1110.5	1147.1	1224.4	1305.7	1338.3
52.5°	1043.4	1077.9	1159.3	1246.7	1277.2
55°	966.1	1004.7	1094.2	1183.7	1218.3
57.5°	886.7	929.5	1025.0	1122.7	1157.2
60°	809.5	856.2	962.0	1059.6	1098.3
62.5°	734.2	781.0	890.8	992.5	1031.1
65°	652.9	707.8	821.7	925.4	962.0
67.5°	575.6	634.6	754.5	856.2	892.8
70°	500.3	557.3	685.4	785.1	821.7
72.5°	419.0	484.1	612.2	715.9	754.5
75°	337.6	414.9	541.0	642.7	679.3
77.5°	262.4	341.7	467.8	551.2	569.5
80°	193.2	274.6	384.4	443.4	465.7
82.5°	124.1	205.4	292.9	335.6	353.9
85°	69.2	136.3	191.2	215.6	223.7
87.5°	28.5	59.0	77.3	87.5	87.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)