

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: P311724

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CP125-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: P311724  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
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-S-CP125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 5792.0 lumens  
Efficiency: N/A  
Efficacy: 111.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

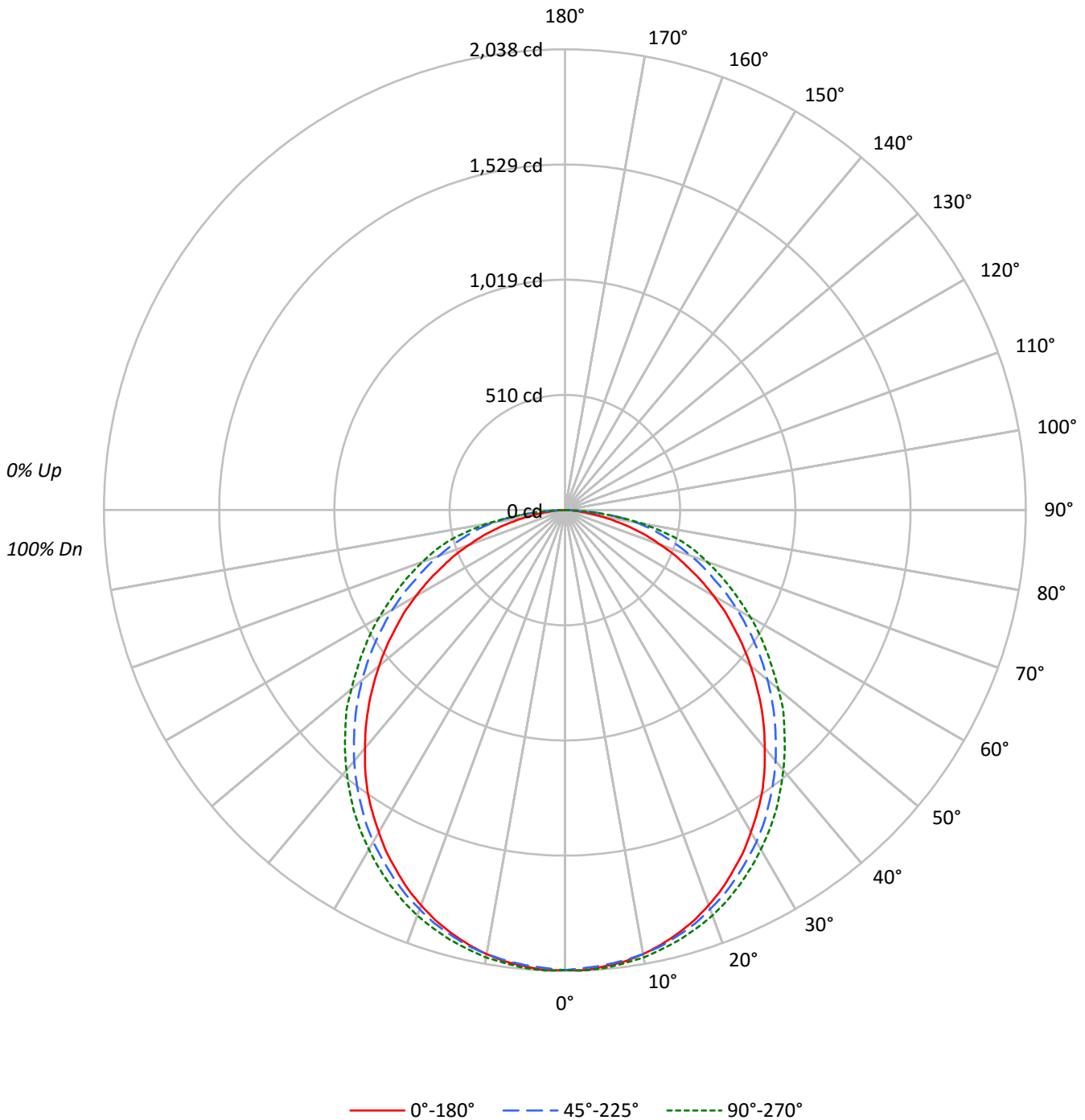
Input Watts (W): 52.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	2738	2738	2738
5°	2736	2728	2746
10°	2725	2725	2745
15°	2699	2711	2740
20°	2663	2690	2732
25°	2614	2663	2715
30°	2555	2632	2692
35°	2499	2590	2671
40°	2414	2546	2640
45°	2335	2496	2612
50°	2245	2449	2580
55°	2145	2404	2555
60°	2045	2366	2550
65°	1915	2325	2565
70°	1773	2338	2635
75°	1588	2381	2783
80°	1283	2523	2723
85°	966	2215	2158



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	192.6	3.3
10°-20°	550.4	9.5
20°-30°	827.4	14.3
30°-40°	985.6	17.0
40°-50°	1008.7	17.4
50°-60°	908.1	15.7
60°-70°	713.2	12.3
70°-80°	462.9	8.0
80°-90°	143.1	2.5
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°	1570.5	27.1
0°-40°	2556.0	44.1
0°-60°	4472.8	77.2
0°-90°	5792.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5792.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2035	2035	2035	2035	2035	
5°	2026	2029	2020	2031	2033	192
15°	1937	1943	1946	1963	1967	546
25°	1761	1775	1794	1823	1829	811
35°	1522	1540	1577	1615	1626	949
45°	1227	1257	1312	1361	1372	946
55°	914	955	1025	1078	1089	820
65°	602	648	730	791	806	599
75°	305	364	458	521	535	323
85°	63	116	144	140	140	76
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2034.8	2034.8	2034.8	2034.8	2034.8
2.5°	2036.6	2036.6	2027.4	2036.6	2038.4
5°	2025.6	2029.2	2020.0	2031.1	2032.9
7.5°	2014.5	2014.5	2009.0	2020.0	2021.9
10°	1994.3	1996.1	1994.3	2007.2	2009.0
12.5°	1968.5	1972.2	1974.1	1986.9	1988.8
15°	1937.3	1942.8	1946.5	1963.0	1966.7
17.5°	1902.3	1907.8	1917.0	1935.4	1939.1
20°	1860.0	1867.3	1878.4	1902.3	1907.8
22.5°	1814.0	1821.4	1839.8	1861.8	1871.0
25°	1760.6	1775.4	1793.8	1823.2	1828.7
27.5°	1707.3	1720.2	1744.1	1775.4	1782.7
30°	1644.7	1665.0	1694.4	1725.7	1733.0
32.5°	1584.0	1604.3	1639.2	1672.3	1681.5
35°	1521.5	1539.9	1576.7	1615.3	1626.3
37.5°	1449.7	1473.6	1514.1	1552.8	1563.8
40°	1374.3	1403.7	1449.7	1490.2	1503.1
42.5°	1302.5	1333.8	1379.8	1424.0	1438.7
45°	1227.1	1256.6	1311.7	1361.4	1372.5
47.5°	1149.8	1183.0	1241.8	1291.5	1309.9
50°	1072.6	1107.5	1170.1	1221.6	1232.6
52.5°	995.3	1032.1	1098.3	1153.5	1159.0
55°	914.4	954.8	1024.7	1078.1	1089.1
57.5°	840.8	875.7	951.2	1006.3	1019.2
60°	759.8	798.5	879.4	930.9	947.5
62.5°	682.5	723.0	807.7	859.2	873.9
65°	601.6	647.6	730.4	791.1	805.8
67.5°	531.7	575.8	664.2	723.0	737.7
70°	450.7	500.4	594.2	655.0	669.7
72.5°	380.8	432.3	526.2	585.0	607.1
75°	305.4	364.3	458.1	520.7	535.4
77.5°	231.8	299.9	395.5	443.4	443.4
80°	165.6	237.3	325.6	347.7	351.4
82.5°	108.5	178.5	241.0	239.2	239.2
85°	62.6	115.9	143.5	139.8	139.8
87.5°	23.9	47.8	51.5	51.5	49.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)