

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: P314466

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CA08-W2A-U-3500K**

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: P314466  
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-L83050-S-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 3500K 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: 6279.0 lumens  
Efficiency: N/A  
Efficacy: 119.4 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

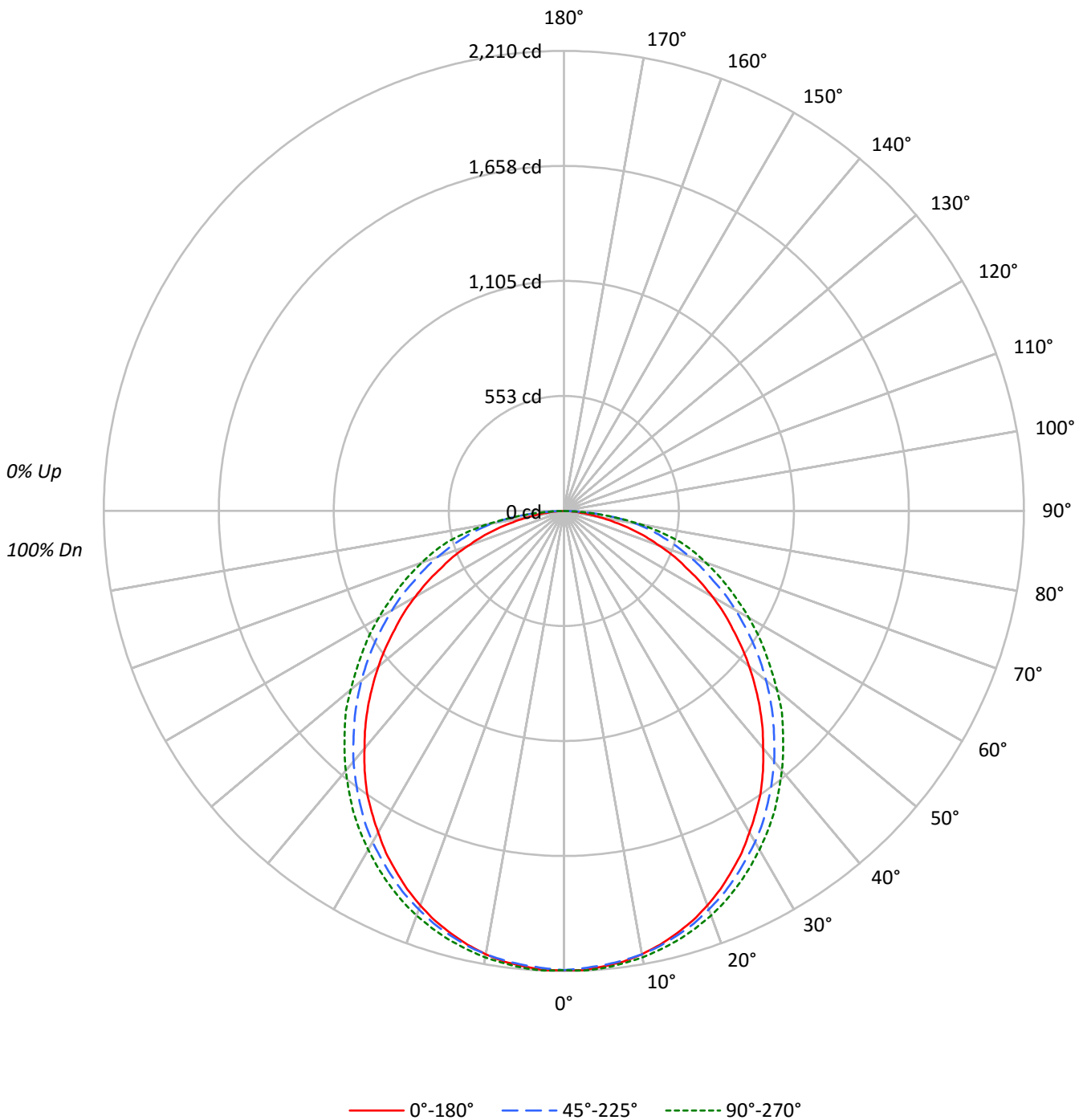
Input Watts (W): 52.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2968	2968	2968
5°	2966	2958	2977
10°	2954	2954	2976
15°	2925	2939	2970
20°	2887	2916	2961
25°	2834	2887	2943
30°	2770	2854	2919
35°	2709	2807	2896
40°	2617	2760	2862
45°	2531	2706	2831
50°	2434	2655	2797
55°	2325	2606	2770
60°	2217	2565	2764
65°	2076	2521	2781
70°	1922	2534	2856
75°	1721	2582	3017
80°	1391	2735	2951
85°	1047	2402	2340



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	208.8	3.3
10°-20°	596.7	9.5
20°-30°	897.0	14.3
30°-40°	1068.4	17.0
40°-50°	1093.5	17.4
50°-60°	984.5	15.7
60°-70°	773.1	12.3
70°-80°	501.8	8.0
80°-90°	155.2	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°	1702.5	27.1
0°-40°	2770.9	44.1
0°-60°	4848.9	77.2
0°-90°	6279.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6279.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2206	2206	2206	2206	2206	
5°	2196	2200	2190	2202	2204	209
15°	2100	2106	2110	2128	2132	592
25°	1909	1925	1945	1976	1982	879
35°	1649	1669	1709	1751	1763	1029
45°	1330	1362	1422	1476	1488	1026
55°	991	1035	1111	1169	1181	889
65°	652	702	792	858	874	649
75°	331	395	497	564	580	350
85°	68	126	156	152	152	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2205.9	2205.9	2205.9	2205.9	2205.9
2.5°	2207.8	2207.8	2197.9	2207.8	2209.8
5°	2195.9	2199.9	2189.9	2201.9	2203.9
7.5°	2183.9	2183.9	2177.9	2189.9	2191.9
10°	2162.0	2164.0	2162.0	2175.9	2177.9
12.5°	2134.1	2138.0	2140.0	2154.0	2156.0
15°	2100.1	2106.1	2110.1	2128.1	2132.1
17.5°	2062.3	2068.2	2078.2	2098.2	2102.1
20°	2016.4	2024.4	2036.3	2062.3	2068.2
22.5°	1966.5	1974.5	1994.4	2018.4	2028.3
25°	1908.7	1924.6	1944.6	1976.5	1982.5
27.5°	1850.8	1864.8	1890.7	1924.6	1932.6
30°	1783.0	1805.0	1836.9	1870.8	1878.8
32.5°	1717.2	1739.2	1777.0	1812.9	1822.9
35°	1649.4	1669.3	1709.2	1751.1	1763.1
37.5°	1571.6	1597.5	1641.4	1683.3	1695.3
40°	1489.8	1521.8	1571.6	1615.5	1629.5
42.5°	1412.1	1446.0	1495.8	1543.7	1559.7
45°	1330.3	1362.2	1422.0	1475.9	1487.9
47.5°	1246.5	1282.4	1346.2	1400.1	1420.0
50°	1162.8	1200.7	1268.5	1324.3	1336.3
52.5°	1079.0	1118.9	1190.7	1250.5	1256.5
55°	991.2	1035.1	1110.9	1168.7	1180.7
57.5°	911.5	949.4	1031.1	1091.0	1104.9
60°	823.7	865.6	953.3	1009.2	1027.1
62.5°	739.9	783.8	875.6	931.4	947.4
65°	652.2	702.0	791.8	857.6	873.6
67.5°	576.4	624.3	720.0	783.8	799.8
70°	488.6	542.5	644.2	710.0	726.0
72.5°	412.8	468.7	570.4	634.2	658.2
75°	331.1	394.9	496.6	564.4	580.4
77.5°	251.3	325.1	428.8	480.7	480.7
80°	179.5	257.3	353.0	376.9	380.9
82.5°	117.7	193.5	261.3	259.3	259.3
85°	67.8	125.6	155.6	151.6	151.6
87.5°	25.9	51.9	55.8	55.8	53.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)