

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: P314162

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CP250-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: P314162  
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: 24FCZ2-75HE-UNV-L83050-CP250-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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**

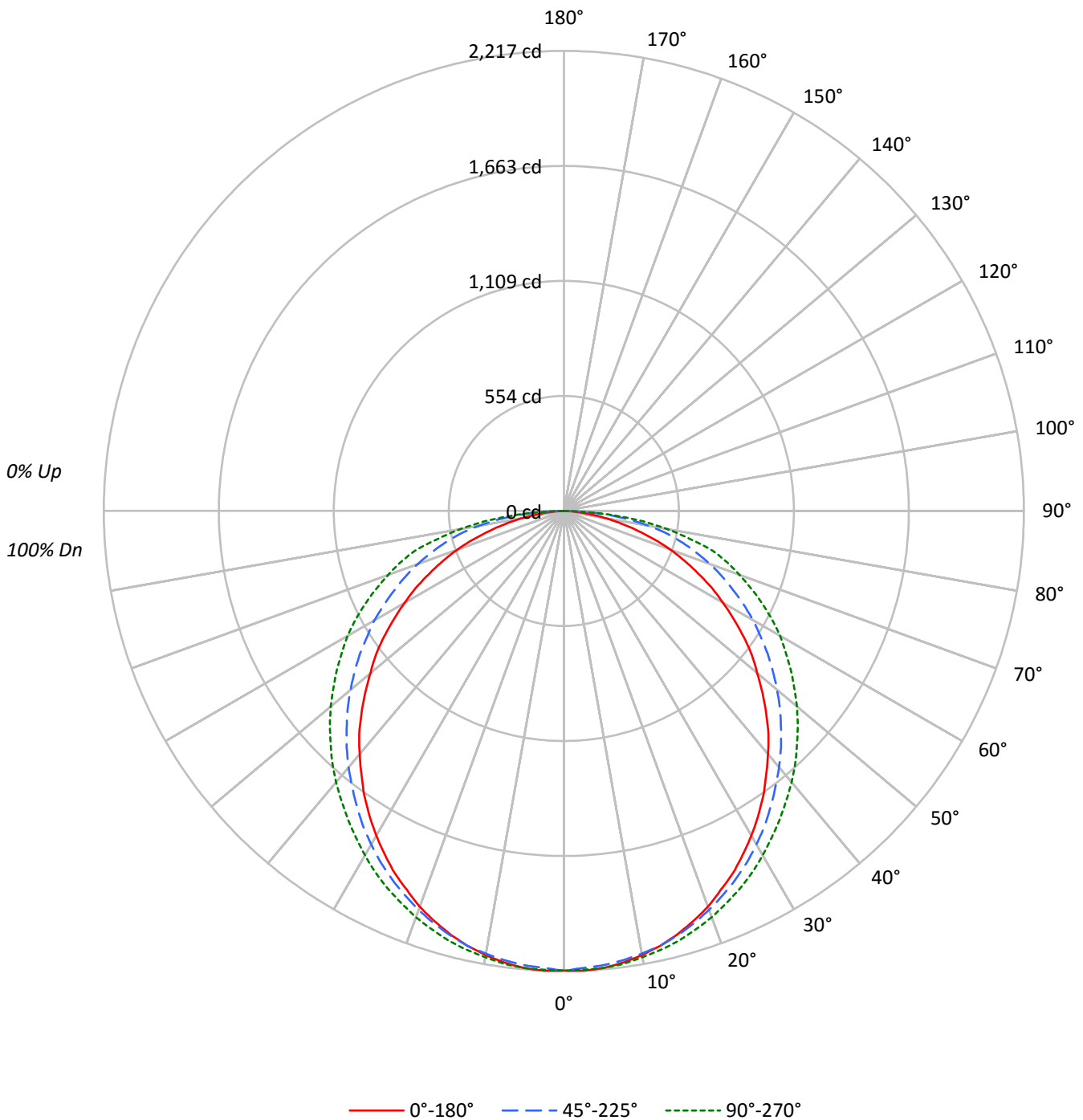
Lumens per Lamp: N/A  
Luminaire Lumens: 6716.0 lumens  
Efficiency: N/A  
Efficacy: 104.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 64.2  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P314162

CATALOG NUMBER: 24FCZ2-75HE-UNV-L83050-CP250-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P314162

CATALOG NUMBER: 24FCZ2-75HE-UNV-L83050-CP250-W2A-U-4000K

**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°	2980	2980	2980
5°	2985	2967	2985
10°	2968	2959	2983
15°	2942	2949	2986
20°	2906	2929	2983
25°	2861	2908	2981
30°	2808	2884	2977
35°	2752	2855	2979
40°	2689	2834	2998
45°	2625	2815	3023
50°	2547	2808	3069
55°	2483	2812	3131
60°	2386	2836	3238
65°	2277	2866	3356
70°	2156	2954	3541
75°	1923	3081	3869
80°	1640	3263	3954
85°	1170	3234	3784



TEST NUMBER: P314162

CATALOG NUMBER: 24FCZ2-75HE-UNV-L83050-CP250-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	209.6	3.1
10°-20°	599.4	8.9
20°-30°	905.3	13.5
30°-40°	1091.1	16.2
40°-50°	1145.4	17.1
50°-60°	1071.6	16.0
60°-70°	885.0	13.2
70°-80°	603.0	9.0
80°-90°	205.7	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°	1714.2	25.5
0°-40°	2805.3	41.8
0°-60°	5022.3	74.8
0°-90°	6716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6716.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2215	2215	2215	2215	2215	
5°	2210	2208	2197	2210	2210	210
15°	2112	2115	2117	2139	2144	595
25°	1927	1936	1959	1996	2008	887
35°	1676	1694	1738	1796	1814	1047
45°	1379	1408	1480	1560	1589	1064
55°	1058	1101	1199	1297	1335	945
65°	715	775	900	1014	1054	709
75°	370	455	593	704	744	394
85°	76	149	210	236	245	95
90°	0	0	0	0	0	



TEST NUMBER: P314162

CATALOG NUMBER: 24FCZ2-75HE-UNV-L83050-CP250-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2214.9	2214.9	2214.9	2214.9	2214.9
2.5°	2217.1	2214.9	2203.7	2214.9	2212.7
5°	2210.4	2208.2	2197.1	2210.4	2210.4
7.5°	2194.8	2194.8	2183.7	2199.3	2201.5
10°	2172.5	2172.5	2165.9	2183.7	2183.7
12.5°	2145.8	2145.8	2145.8	2163.6	2165.9
15°	2112.4	2114.6	2116.8	2139.1	2143.6
17.5°	2072.3	2076.7	2083.4	2110.2	2114.6
20°	2029.9	2034.4	2045.5	2076.7	2083.4
22.5°	1976.5	1987.6	2003.2	2038.8	2045.5
25°	1927.4	1936.3	1958.6	1996.5	2007.7
27.5°	1867.3	1880.6	1909.6	1949.7	1965.3
30°	1807.1	1820.5	1856.1	1902.9	1916.3
32.5°	1742.5	1762.5	1800.4	1849.4	1865.0
35°	1675.6	1693.5	1738.0	1796.0	1813.8
37.5°	1602.1	1626.6	1675.6	1738.0	1760.3
40°	1530.8	1557.5	1613.3	1680.1	1706.8
42.5°	1459.5	1486.2	1548.6	1624.4	1651.1
45°	1379.3	1408.3	1479.6	1559.8	1588.7
47.5°	1299.1	1334.7	1412.7	1497.4	1528.6
50°	1216.6	1256.7	1341.4	1430.5	1466.2
52.5°	1143.1	1181.0	1270.1	1365.9	1399.3
55°	1058.4	1100.8	1198.8	1296.8	1334.7
57.5°	971.5	1018.3	1123.0	1230.0	1267.9
60°	886.8	938.1	1054.0	1160.9	1203.3
62.5°	804.4	855.6	976.0	1087.4	1129.7
65°	715.3	775.4	900.2	1013.9	1054.0
67.5°	630.6	695.2	826.7	938.1	978.2
70°	548.1	610.5	750.9	860.1	900.2
72.5°	459.0	530.3	670.7	784.3	826.7
75°	369.9	454.6	592.7	704.1	744.2
77.5°	287.4	374.3	512.5	603.9	623.9
80°	211.7	300.8	421.1	485.8	510.3
82.5°	135.9	225.1	320.9	367.7	387.7
85°	75.8	149.3	209.5	236.2	245.1
87.5°	31.2	64.6	84.7	95.8	95.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)