

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: P314484

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CP187-W2A-U-5000K**

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: P314484
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-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (336) 5000K 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: 6228.0 lumens
Efficiency: N/A
Efficacy: 112.8 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

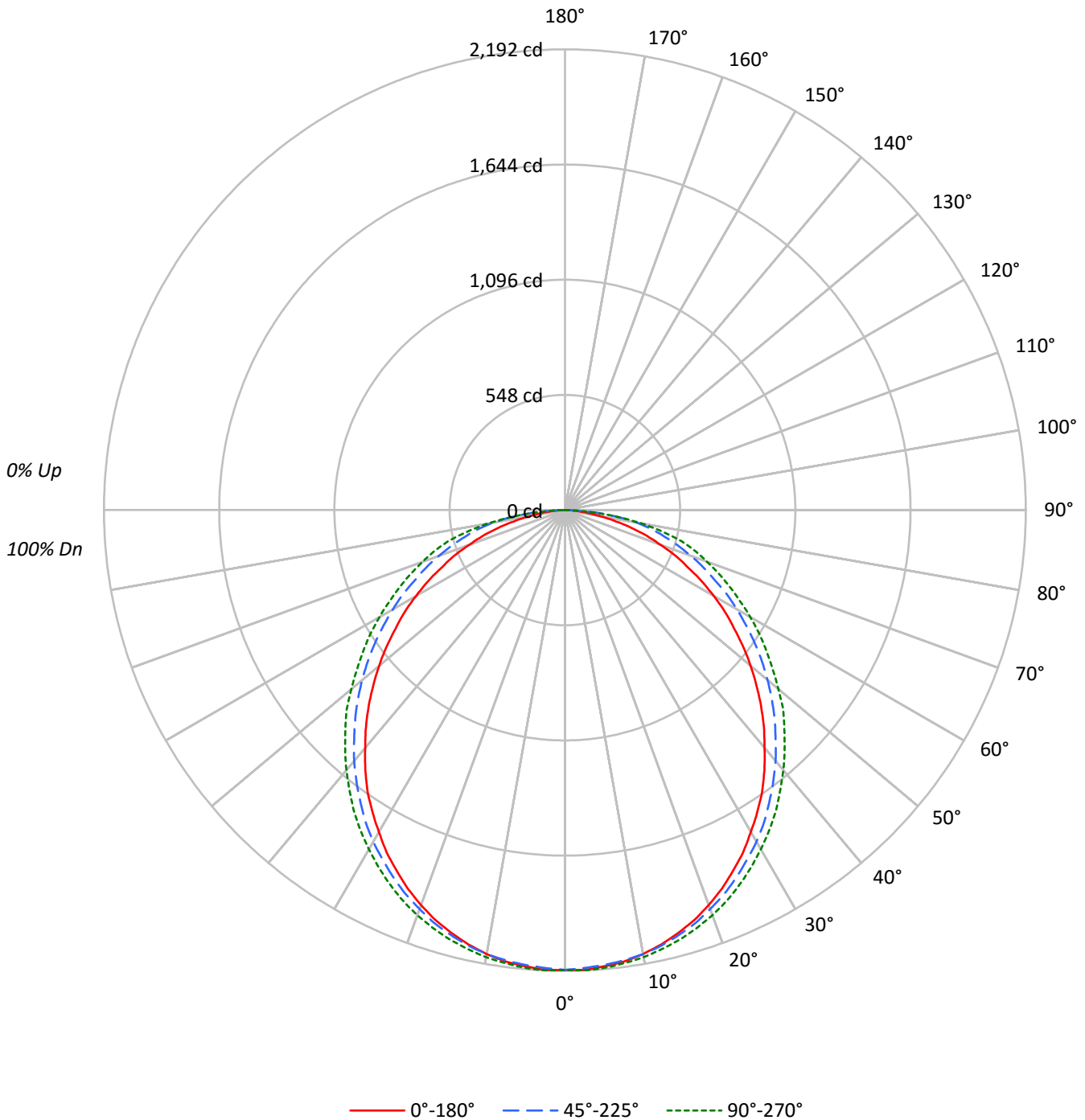
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314484

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-S-CP187-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P314484

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-S-CP187-W2A-U-5000K

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°	2944	2944	2944
5°	2942	2934	2952
10°	2930	2930	2951
15°	2902	2915	2946
20°	2864	2892	2937
25°	2811	2863	2919
30°	2748	2831	2895
35°	2687	2785	2872
40°	2595	2738	2839
45°	2511	2684	2808
50°	2414	2634	2774
55°	2306	2585	2747
60°	2199	2545	2742
65°	2060	2500	2759
70°	1907	2514	2833
75°	1707	2561	2993
80°	1379	2713	2927
85°	1039	2382	2320



TEST NUMBER: P314484

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-S-CP187-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.1	3.3
10°-20°	591.9	9.5
20°-30°	889.7	14.3
30°-40°	1059.8	17.0
40°-50°	1084.6	17.4
50°-60°	976.5	15.7
60°-70°	766.8	12.3
70°-80°	497.7	8.0
80°-90°	153.9	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°	1688.7	27.1
0°-40°	2748.4	44.1
0°-60°	4809.5	77.2
0°-90°	6228.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6228.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2188	2188	2188	2188	2188	
5°	2178	2182	2172	2184	2186	207
15°	2083	2089	2093	2111	2115	587
25°	1893	1909	1929	1960	1966	872
35°	1636	1656	1695	1737	1749	1021
45°	1320	1351	1410	1464	1476	1017
55°	983	1027	1102	1159	1171	881
65°	647	696	785	851	866	644
75°	328	392	493	560	576	348
85°	67	125	154	150	150	81
90°	0	0	0	0	0	



TEST NUMBER: P314484

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-S-CP187-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2187.9	2187.9	2187.9	2187.9	2187.9
2.5°	2189.9	2189.9	2180.0	2189.9	2191.9
5°	2178.0	2182.0	2172.1	2184.0	2186.0
7.5°	2166.2	2166.2	2160.2	2172.1	2174.1
10°	2144.4	2146.4	2144.4	2158.3	2160.2
12.5°	2116.7	2120.7	2122.7	2136.5	2138.5
15°	2083.1	2089.0	2093.0	2110.8	2114.7
17.5°	2045.5	2051.4	2061.3	2081.1	2085.1
20°	2000.0	2007.9	2019.8	2045.5	2051.4
22.5°	1950.5	1958.5	1978.2	2002.0	2011.9
25°	1893.2	1909.0	1928.8	1960.4	1966.4
27.5°	1835.8	1849.7	1875.4	1909.0	1916.9
30°	1768.5	1790.3	1822.0	1855.6	1863.5
32.5°	1703.3	1725.0	1762.6	1798.2	1808.1
35°	1636.0	1655.8	1695.4	1736.9	1748.8
37.5°	1558.9	1584.6	1628.1	1669.6	1681.5
40°	1477.7	1509.4	1558.9	1602.4	1616.2
42.5°	1400.6	1434.2	1483.7	1531.2	1547.0
45°	1319.5	1351.1	1410.5	1463.9	1475.8
47.5°	1236.4	1272.0	1335.3	1388.7	1408.5
50°	1153.3	1190.9	1258.2	1313.6	1325.4
52.5°	1070.2	1109.8	1181.0	1240.4	1246.3
55°	983.2	1026.7	1101.9	1159.3	1171.1
57.5°	904.1	941.6	1022.8	1082.1	1095.9
60°	817.0	858.6	945.6	1001.0	1018.8
62.5°	733.9	777.4	868.4	923.8	939.7
65°	646.9	696.3	785.4	850.6	866.5
67.5°	571.7	619.2	714.1	777.4	793.3
70°	484.7	538.1	639.0	704.3	720.1
72.5°	409.5	464.9	565.8	629.1	652.8
75°	328.4	391.7	492.6	559.8	575.7
77.5°	249.3	322.5	425.3	476.8	476.8
80°	178.0	255.2	350.1	373.9	377.8
82.5°	116.7	191.9	259.1	257.2	257.2
85°	67.3	124.6	154.3	150.3	150.3
87.5°	25.7	51.4	55.4	55.4	53.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)