

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: P314489

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CP250-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: P314489
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 6177.0 lumens
Efficiency: N/A
Efficacy: 111.9 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

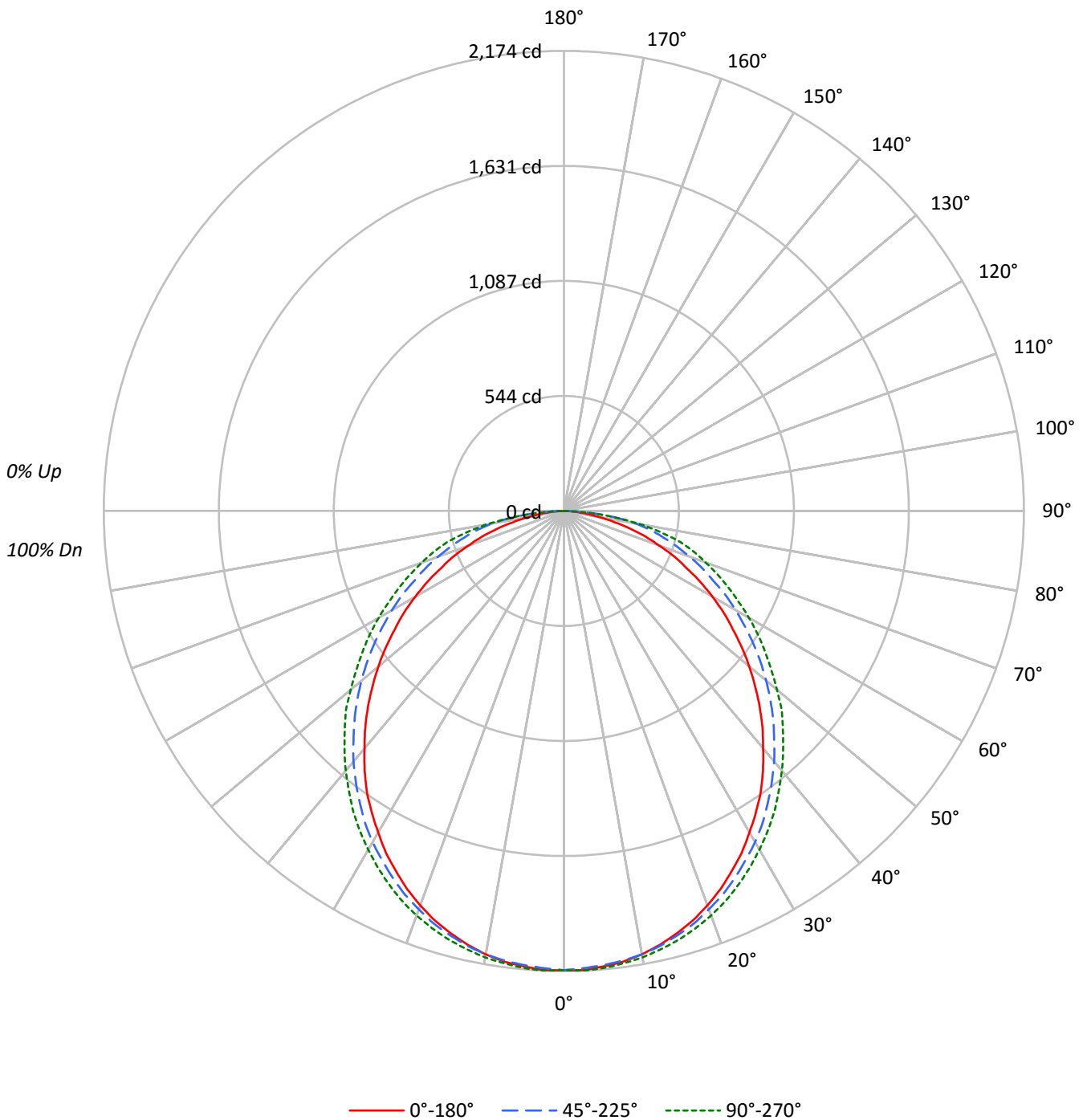
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2920	2920	2920
5°	2918	2910	2928
10°	2906	2906	2927
15°	2878	2891	2922
20°	2840	2868	2913
25°	2788	2840	2895
30°	2725	2807	2871
35°	2665	2762	2849
40°	2574	2716	2816
45°	2490	2662	2785
50°	2394	2612	2752
55°	2287	2564	2725
60°	2181	2524	2719
65°	2043	2480	2736
70°	1891	2493	2810
75°	1693	2540	2968
80°	1368	2691	2904
85°	1030	2362	2302



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.4	3.3
10°-20°	587.0	9.5
20°-30°	882.4	14.3
30°-40°	1051.1	17.0
40°-50°	1075.7	17.4
50°-60°	968.5	15.7
60°-70°	760.6	12.3
70°-80°	493.6	8.0
80°-90°	152.7	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°	1674.8	27.1
0°-40°	2725.9	44.1
0°-60°	4770.2	77.2
0°-90°	6177.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6177.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2170	2170	2170	2170	2170	
5°	2160	2164	2154	2166	2168	205
15°	2066	2072	2076	2094	2097	583
25°	1878	1893	1913	1944	1950	865
35°	1623	1642	1682	1723	1734	1012
45°	1309	1340	1399	1452	1464	1009
55°	975	1018	1093	1150	1162	874
65°	642	691	779	844	859	639
75°	326	388	488	555	571	345
85°	67	124	153	149	149	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2170.0	2170.0	2170.0	2170.0	2170.0
2.5°	2172.0	2172.0	2162.2	2172.0	2173.9
5°	2160.2	2164.1	2154.3	2166.1	2168.1
7.5°	2148.4	2148.4	2142.6	2154.3	2156.3
10°	2126.9	2128.8	2126.9	2140.6	2142.6
12.5°	2099.4	2103.3	2105.3	2119.0	2121.0
15°	2066.0	2071.9	2075.8	2093.5	2097.4
17.5°	2028.8	2034.6	2044.4	2064.1	2068.0
20°	1983.6	1991.5	2003.2	2028.8	2034.6
22.5°	1934.6	1942.4	1962.0	1985.6	1995.4
25°	1877.7	1893.4	1913.0	1944.4	1950.3
27.5°	1820.8	1834.5	1860.0	1893.4	1901.2
30°	1754.1	1775.6	1807.0	1840.4	1848.2
32.5°	1689.3	1710.9	1748.2	1783.5	1793.3
35°	1622.6	1642.2	1681.5	1722.7	1734.4
37.5°	1546.1	1571.6	1614.8	1656.0	1667.7
40°	1465.6	1497.0	1546.1	1589.3	1603.0
42.5°	1389.1	1422.5	1471.5	1518.6	1534.3
45°	1308.7	1340.1	1398.9	1451.9	1463.7
47.5°	1226.3	1261.6	1324.4	1377.4	1397.0
50°	1143.9	1181.2	1247.9	1302.8	1314.6
52.5°	1061.5	1100.7	1171.3	1230.2	1236.1
55°	975.1	1018.3	1092.9	1149.8	1161.5
57.5°	896.7	933.9	1014.4	1073.2	1087.0
60°	810.3	851.5	937.9	992.8	1010.5
62.5°	727.9	771.1	861.3	916.3	932.0
65°	641.6	690.6	778.9	843.7	859.4
67.5°	567.0	614.1	708.3	771.1	786.8
70°	480.7	533.7	633.7	698.5	714.2
72.5°	406.1	461.1	561.1	623.9	647.5
75°	325.7	388.5	488.5	555.3	571.0
77.5°	247.2	319.8	421.8	472.9	472.9
80°	176.6	253.1	347.3	370.8	374.8
82.5°	115.8	190.3	257.0	255.1	255.1
85°	66.7	123.6	153.0	149.1	149.1
87.5°	25.5	51.0	54.9	54.9	53.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)