

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: P314487

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-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: P314487
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 6119.0 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

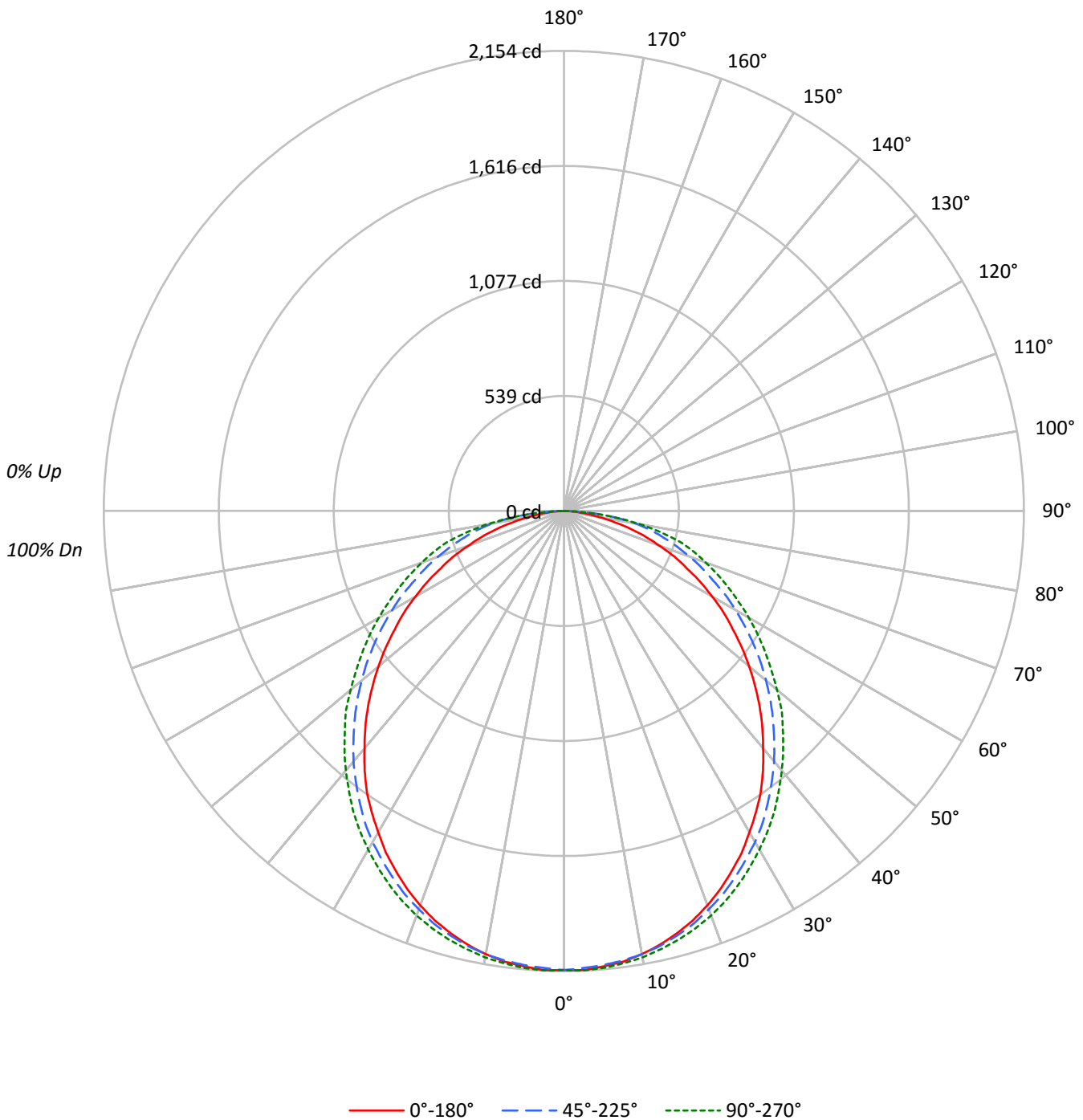
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2892	2892	2892
5°	2890	2882	2901
10°	2879	2879	2900
15°	2851	2864	2894
20°	2814	2841	2886
25°	2761	2813	2868
30°	2700	2781	2845
35°	2640	2736	2822
40°	2550	2690	2789
45°	2467	2637	2759
50°	2372	2587	2726
55°	2266	2540	2699
60°	2160	2500	2694
65°	2024	2457	2710
70°	1873	2470	2783
75°	1677	2516	2940
80°	1355	2665	2876
85°	1020	2340	2280



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.5	3.3
10°-20°	581.5	9.5
20°-30°	874.1	14.3
30°-40°	1041.2	17.0
40°-50°	1065.6	17.4
50°-60°	959.4	15.7
60°-70°	753.4	12.3
70°-80°	489.0	8.0
80°-90°	151.2	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°	1659.1	27.1
0°-40°	2700.3	44.1
0°-60°	4725.4	77.2
0°-90°	6119.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6119.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2150	2150	2150	2150	2150	
5°	2140	2144	2134	2146	2148	203
15°	2047	2052	2056	2074	2078	577
25°	1860	1876	1895	1926	1932	857
35°	1607	1627	1666	1706	1718	1003
45°	1296	1328	1386	1438	1450	999
55°	966	1009	1083	1139	1151	866
65°	636	684	772	836	851	633
75°	323	385	484	550	566	341
85°	66	122	152	148	148	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2149.6	2149.6	2149.6	2149.6	2149.6
2.5°	2151.6	2151.6	2141.9	2151.6	2153.5
5°	2139.9	2143.8	2134.1	2145.8	2147.7
7.5°	2128.3	2128.3	2122.4	2134.1	2136.0
10°	2106.9	2108.8	2106.9	2120.5	2122.4
12.5°	2079.7	2083.6	2085.5	2099.1	2101.1
15°	2046.6	2052.5	2056.4	2073.8	2077.7
17.5°	2009.7	2015.5	2025.3	2044.7	2048.6
20°	1965.0	1972.8	1984.4	2009.7	2015.5
22.5°	1916.4	1924.2	1943.6	1966.9	1976.7
25°	1860.0	1875.6	1895.0	1926.1	1932.0
27.5°	1803.7	1817.3	1842.6	1875.6	1883.4
30°	1737.6	1759.0	1790.1	1823.1	1830.9
32.5°	1673.5	1694.8	1731.8	1766.8	1776.5
35°	1607.4	1626.8	1665.7	1706.5	1718.2
37.5°	1531.6	1556.8	1599.6	1640.4	1652.1
40°	1451.9	1483.0	1531.6	1574.3	1587.9
42.5°	1376.1	1409.1	1457.7	1504.4	1519.9
45°	1296.4	1327.5	1385.8	1438.3	1449.9
47.5°	1214.8	1249.7	1311.9	1364.4	1383.9
50°	1133.1	1170.1	1236.1	1290.6	1302.2
52.5°	1051.5	1090.4	1160.3	1218.7	1224.5
55°	966.0	1008.7	1082.6	1139.0	1150.6
57.5°	888.2	925.2	1004.9	1063.2	1076.8
60°	802.7	843.5	929.1	983.5	1001.0
62.5°	721.1	763.8	853.2	907.7	923.2
65°	635.6	684.2	771.6	835.8	851.3
67.5°	561.7	608.4	701.6	763.8	779.4
70°	476.2	528.7	627.8	691.9	707.5
72.5°	402.3	456.8	555.9	618.1	641.4
75°	322.6	384.8	484.0	550.0	565.6
77.5°	244.9	316.8	417.9	468.4	468.4
80°	174.9	250.7	344.0	367.3	371.2
82.5°	114.7	188.5	254.6	252.7	252.7
85°	66.1	122.4	151.6	147.7	147.7
87.5°	25.3	50.5	54.4	54.4	52.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)