

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: P311721

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CA125-W2A-U-5700K**

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: P311721
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-L82765-S-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5700K 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: 6523.0 lumens
Efficiency: N/A
Efficacy: 120.6 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

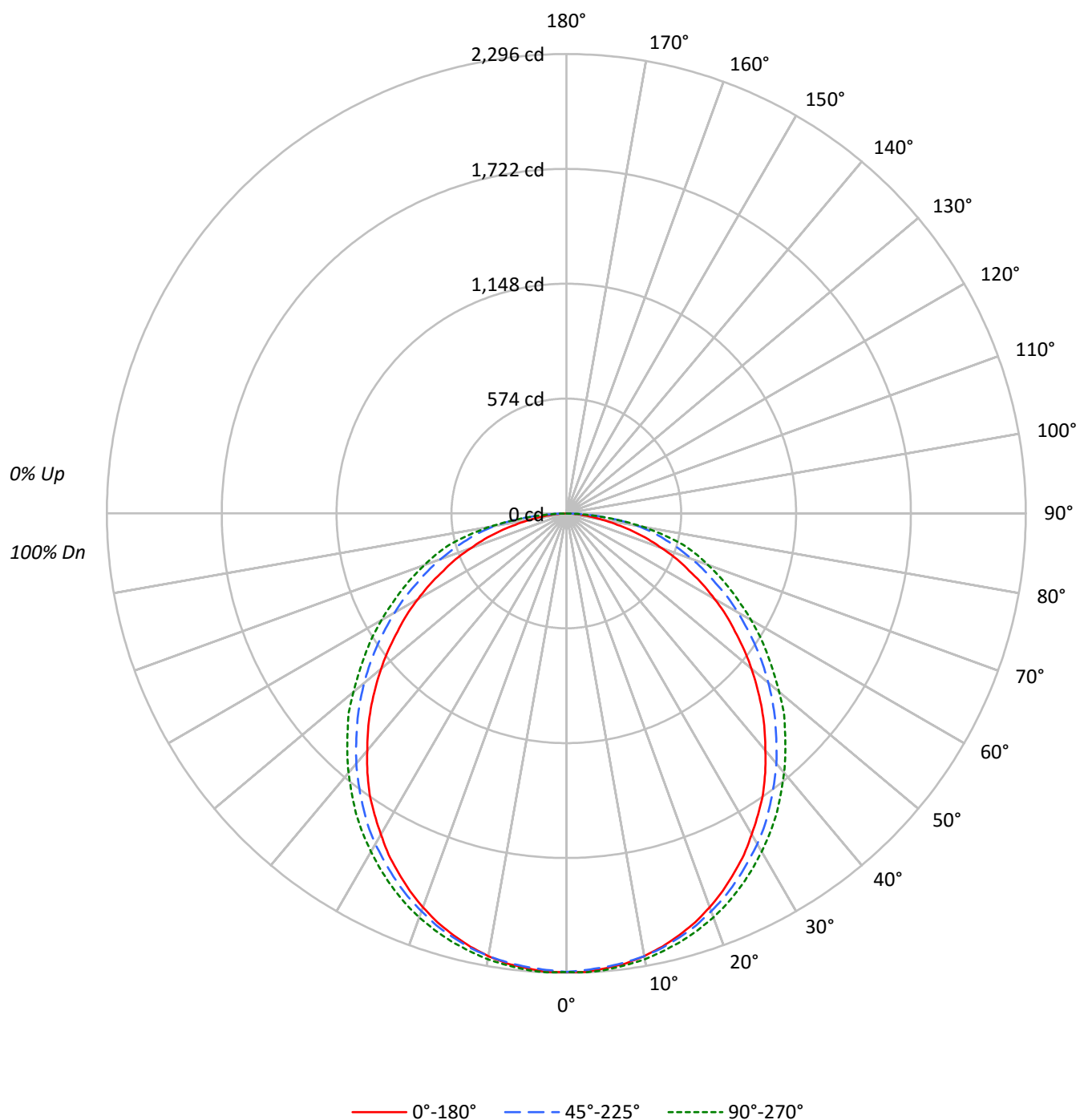
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3083	3083	3083
5°	3081	3073	3092
10°	3069	3069	3091
15°	3039	3053	3085
20°	2999	3029	3076
25°	2944	2999	3057
30°	2878	2965	3032
35°	2814	2917	3008
40°	2718	2868	2973
45°	2630	2811	2941
50°	2528	2758	2906
55°	2416	2707	2877
60°	2303	2665	2872
65°	2157	2619	2889
70°	1997	2633	2967
75°	1788	2682	3134
80°	1445	2841	3066
85°	1087	2495	2431



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.9	3.3
10°-20°	619.9	9.5
20°-30°	931.8	14.3
30°-40°	1110.0	17.0
40°-50°	1136.0	17.4
50°-60°	1022.7	15.7
60°-70°	803.2	12.3
70°-80°	521.3	8.0
80°-90°	161.2	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°	1768.7	27.1
0°-40°	2878.6	44.1
0°-60°	5037.4	77.2
0°-90°	6523.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6523.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2292	2292	2292	2292	2292	
5°	2281	2285	2275	2287	2290	217
15°	2182	2188	2192	2211	2215	615
25°	1983	1999	2020	2053	2060	913
35°	1714	1734	1776	1819	1832	1069
45°	1382	1415	1477	1533	1546	1065
55°	1030	1075	1154	1214	1227	923
65°	678	729	823	891	908	674
75°	344	410	516	586	603	364
85°	70	130	162	158	158	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2291.6	2291.6	2291.6	2291.6	2291.6
2.5°	2293.6	2293.6	2283.3	2293.6	2295.7
5°	2281.2	2285.4	2275.0	2287.4	2289.5
7.5°	2268.8	2268.8	2262.6	2275.0	2277.1
10°	2246.0	2248.1	2246.0	2260.5	2262.6
12.5°	2217.0	2221.1	2223.2	2237.7	2239.8
15°	2181.8	2188.0	2192.1	2210.8	2214.9
17.5°	2142.4	2148.6	2159.0	2179.7	2183.8
20°	2094.7	2103.0	2115.5	2142.4	2148.6
22.5°	2042.9	2051.2	2071.9	2096.8	2107.2
25°	1982.9	1999.4	2020.1	2053.3	2059.5
27.5°	1922.8	1937.3	1964.2	1999.4	2007.7
30°	1852.3	1875.1	1908.3	1943.5	1951.8
32.5°	1783.9	1806.7	1846.1	1883.4	1893.8
35°	1713.5	1734.2	1775.7	1819.2	1831.6
37.5°	1632.7	1659.6	1705.2	1748.7	1761.2
40°	1547.7	1580.9	1632.7	1678.3	1692.8
42.5°	1466.9	1502.2	1554.0	1603.7	1620.3
45°	1382.0	1415.1	1477.3	1533.2	1545.7
47.5°	1295.0	1332.3	1398.6	1454.5	1475.2
50°	1207.9	1247.3	1317.8	1375.8	1388.2
52.5°	1120.9	1162.4	1237.0	1299.1	1305.3
55°	1029.8	1075.3	1154.1	1214.2	1226.6
57.5°	946.9	986.2	1071.2	1133.4	1147.9
60°	855.7	899.2	990.4	1048.4	1067.1
62.5°	768.7	814.3	909.6	967.6	984.2
65°	677.5	729.3	822.6	890.9	907.5
67.5°	598.8	648.5	748.0	814.3	830.9
70°	507.6	563.6	669.2	737.6	754.2
72.5°	428.9	486.9	592.6	658.9	683.7
75°	343.9	410.2	515.9	586.4	602.9
77.5°	261.1	337.7	445.5	499.3	499.3
80°	186.5	267.3	366.7	391.6	395.7
82.5°	122.2	201.0	271.4	269.4	269.4
85°	70.4	130.5	161.6	157.5	157.5
87.5°	26.9	53.9	58.0	58.0	55.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)