

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: P311833

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP250-W2A-U-3500K**

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: P311833
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: 24FCZ2-75HE-UNV-L82765-S-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 3500K 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

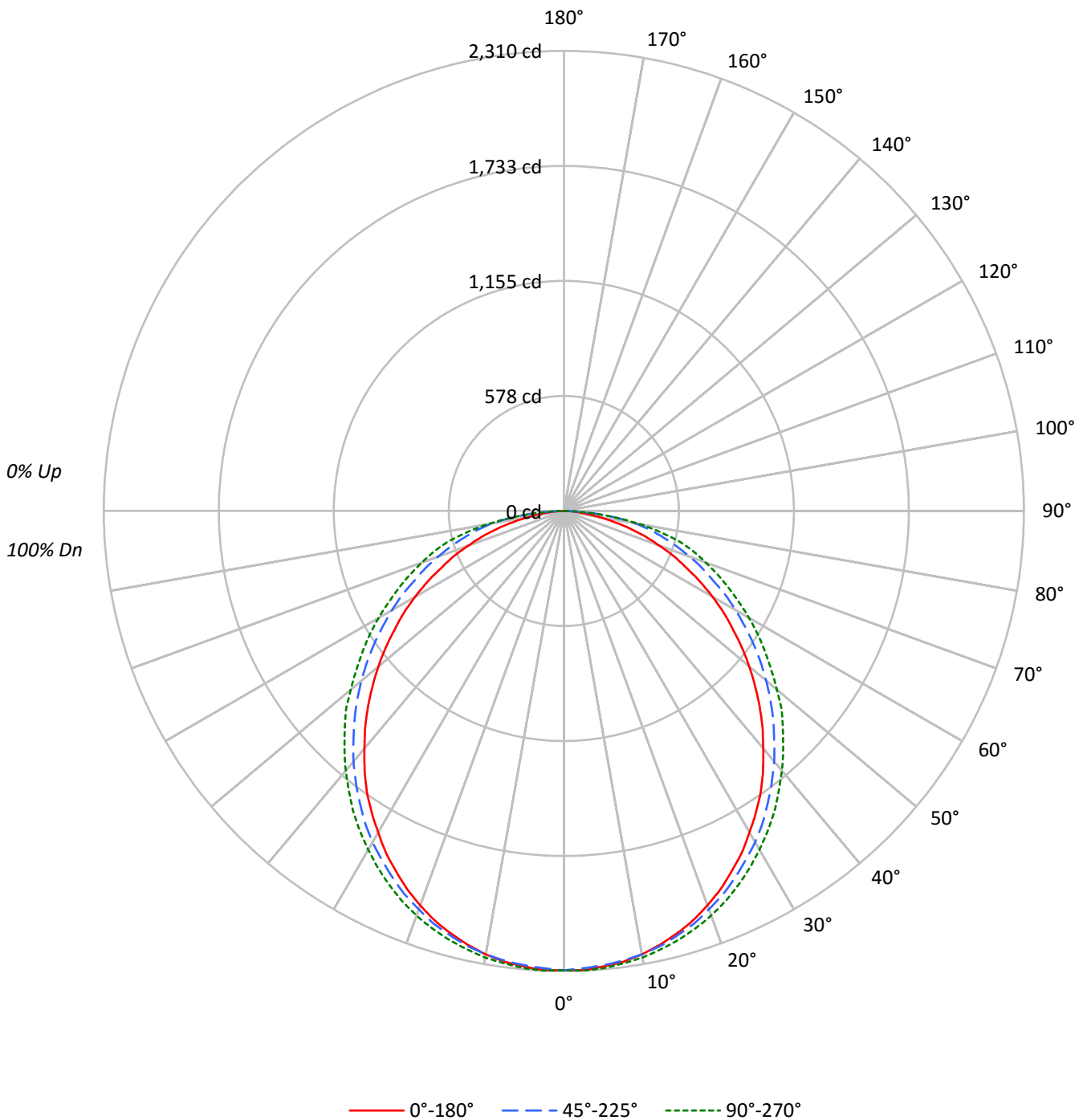
Lumens per Lamp: N/A
Luminaire Lumens: 6564.0 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 63.1
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				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°	3103	3103	3103
5°	3101	3092	3112
10°	3088	3088	3111
15°	3058	3073	3105
20°	3018	3048	3096
25°	2962	3018	3077
30°	2896	2983	3051
35°	2832	2935	3027
40°	2736	2886	2992
45°	2646	2829	2960
50°	2544	2776	2924
55°	2431	2724	2895
60°	2317	2682	2890
65°	2171	2635	2907
70°	2009	2649	2985
75°	1799	2699	3154
80°	1454	2859	3085
85°	1095	2510	2447



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.3	3.3
10°-20°	623.8	9.5
20°-30°	937.7	14.3
30°-40°	1116.9	17.0
40°-50°	1143.1	17.4
50°-60°	1029.2	15.7
60°-70°	808.2	12.3
70°-80°	524.5	8.0
80°-90°	162.2	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°	1779.8	27.1
0°-40°	2896.7	44.1
0°-60°	5069.0	77.2
0°-90°	6564.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6564.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2306	2306	2306	2306	2306	
5°	2296	2300	2289	2302	2304	218
15°	2196	2202	2206	2225	2229	619
25°	1995	2012	2033	2066	2072	919
35°	1724	1745	1787	1831	1843	1076
45°	1391	1424	1487	1543	1555	1072
55°	1036	1082	1161	1222	1234	929
65°	682	734	828	896	913	679
75°	346	413	519	590	607	366
85°	71	131	163	158	158	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2306.0	2306.0	2306.0	2306.0	2306.0
2.5°	2308.1	2308.1	2297.6	2308.1	2310.1
5°	2295.6	2299.7	2289.3	2301.8	2303.9
7.5°	2283.0	2283.0	2276.8	2289.3	2291.4
10°	2260.1	2262.2	2260.1	2274.7	2276.8
12.5°	2230.9	2235.1	2237.2	2251.8	2253.9
15°	2195.5	2201.7	2205.9	2224.7	2228.8
17.5°	2155.9	2162.1	2172.5	2193.4	2197.6
20°	2107.9	2116.2	2128.8	2155.9	2162.1
22.5°	2055.8	2064.1	2085.0	2110.0	2120.4
25°	1995.3	2012.0	2032.8	2066.2	2072.5
27.5°	1934.9	1949.4	1976.6	2012.0	2020.3
30°	1864.0	1886.9	1920.3	1955.7	1964.0
32.5°	1795.2	1818.1	1857.7	1895.2	1905.7
35°	1724.3	1745.1	1786.8	1830.6	1843.1
37.5°	1643.0	1670.1	1715.9	1759.7	1772.2
40°	1557.5	1590.8	1643.0	1688.8	1703.4
42.5°	1476.2	1511.6	1563.7	1613.8	1630.4
45°	1390.7	1424.0	1486.6	1542.9	1555.4
47.5°	1303.1	1340.6	1407.4	1463.6	1484.5
50°	1215.5	1255.2	1326.0	1384.4	1396.9
52.5°	1128.0	1169.7	1244.7	1307.3	1313.5
55°	1036.2	1082.1	1161.3	1221.8	1234.3
57.5°	952.8	992.4	1077.9	1140.5	1155.1
60°	861.1	904.9	996.6	1055.0	1073.8
62.5°	773.5	819.4	915.3	973.7	990.4
65°	681.8	733.9	827.7	896.5	913.2
67.5°	602.6	652.6	752.7	819.4	836.1
70°	510.8	567.1	673.4	742.2	758.9
72.5°	431.6	490.0	596.3	663.0	688.0
75°	346.1	412.8	519.2	590.0	606.7
77.5°	262.7	339.9	448.3	502.5	502.5
80°	187.6	269.0	369.0	394.1	398.2
82.5°	123.0	202.2	273.1	271.0	271.0
85°	70.9	131.4	162.6	158.5	158.5
87.5°	27.1	54.2	58.4	58.4	56.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)