

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: P311804

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA125-W2A-U-2700K**

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: P311804
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-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 2700K 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: 6621.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

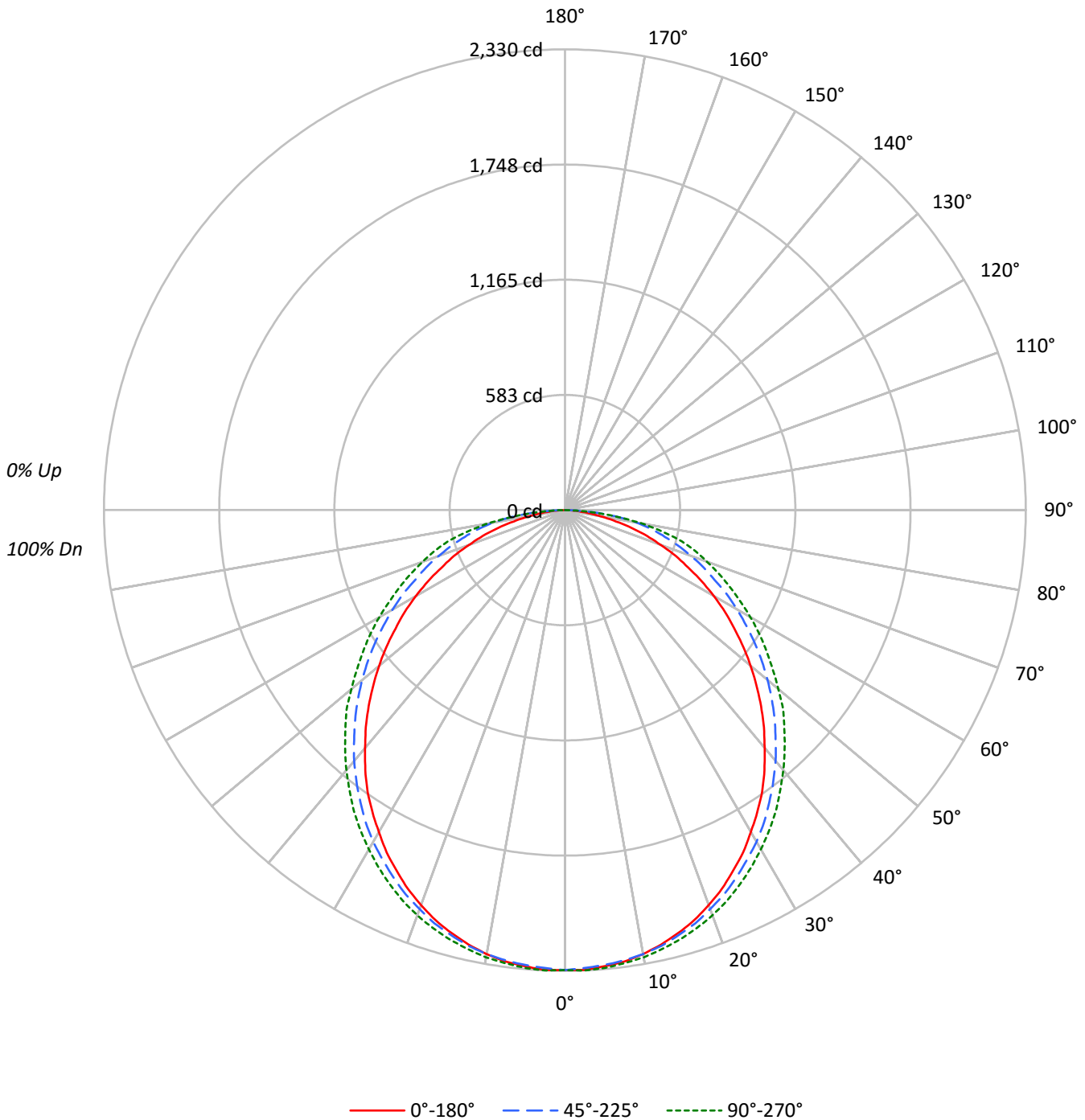
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3130	3130	3130
5°	3127	3119	3139
10°	3115	3115	3138
15°	3085	3099	3132
20°	3044	3074	3123
25°	2988	3044	3104
30°	2921	3009	3078
35°	2857	2960	3054
40°	2759	2911	3018
45°	2669	2853	2985
50°	2566	2800	2950
55°	2452	2748	2921
60°	2337	2705	2915
65°	2189	2658	2933
70°	2027	2672	3011
75°	1815	2722	3182
80°	1467	2884	3113
85°	1104	2532	2467



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.2	3.3
10°-20°	629.2	9.5
20°-30°	945.8	14.3
30°-40°	1126.6	17.0
40°-50°	1153.1	17.4
50°-60°	1038.1	15.7
60°-70°	815.2	12.3
70°-80°	529.1	8.0
80°-90°	163.6	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°	1795.2	27.1
0°-40°	2921.9	44.1
0°-60°	5113.0	77.2
0°-90°	6621.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6621.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2326	2326	2326	2326	2326	
5°	2316	2320	2309	2322	2324	220
15°	2214	2221	2225	2244	2248	624
25°	2013	2030	2050	2084	2090	927
35°	1739	1760	1802	1846	1859	1085
45°	1403	1436	1500	1556	1569	1081
55°	1045	1092	1171	1232	1245	937
65°	688	740	835	904	921	685
75°	349	416	524	595	612	369
85°	72	132	164	160	160	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2326.0	2326.0	2326.0	2326.0	2326.0
2.5°	2328.1	2328.1	2317.6	2328.1	2330.2
5°	2315.5	2319.7	2309.2	2321.8	2323.9
7.5°	2302.9	2302.9	2296.6	2309.2	2311.3
10°	2279.7	2281.8	2279.7	2294.5	2296.6
12.5°	2250.3	2254.5	2256.6	2271.3	2273.4
15°	2214.5	2220.8	2225.1	2244.0	2248.2
17.5°	2174.6	2180.9	2191.4	2212.4	2216.6
20°	2126.2	2134.6	2147.2	2174.6	2180.9
22.5°	2073.6	2082.0	2103.1	2128.3	2138.8
25°	2012.6	2029.5	2050.5	2084.1	2090.5
27.5°	1951.7	1966.4	1993.7	2029.5	2037.9
30°	1880.1	1903.3	1936.9	1972.7	1981.1
32.5°	1810.7	1833.9	1873.8	1911.7	1922.2
35°	1739.2	1760.3	1802.3	1846.5	1859.1
37.5°	1657.2	1684.6	1730.8	1775.0	1787.6
40°	1571.0	1604.6	1657.2	1703.5	1718.2
42.5°	1489.0	1524.7	1577.3	1627.8	1644.6
45°	1402.8	1436.4	1499.5	1556.3	1568.9
47.5°	1314.4	1352.3	1419.6	1476.4	1497.4
50°	1226.1	1266.1	1337.6	1396.4	1409.1
52.5°	1137.8	1179.8	1255.5	1318.6	1324.9
55°	1045.2	1091.5	1171.4	1232.4	1245.0
57.5°	961.1	1001.1	1087.3	1150.4	1165.1
60°	868.6	912.7	1005.3	1064.2	1083.1
62.5°	780.2	826.5	923.2	982.1	999.0
65°	687.7	740.3	834.9	904.3	921.1
67.5°	607.8	658.3	759.2	826.5	843.3
70°	515.3	572.0	679.3	748.7	765.5
72.5°	435.3	494.2	601.5	668.8	694.0
75°	349.1	416.4	523.7	595.2	612.0
77.5°	265.0	342.8	452.2	506.8	506.8
80°	189.3	271.3	372.2	397.5	401.7
82.5°	124.1	204.0	275.5	273.4	273.4
85°	71.5	132.5	164.0	159.8	159.8
87.5°	27.3	54.7	58.9	58.9	56.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)