

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: P311134

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CA125-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: P311134
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 7071.0 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

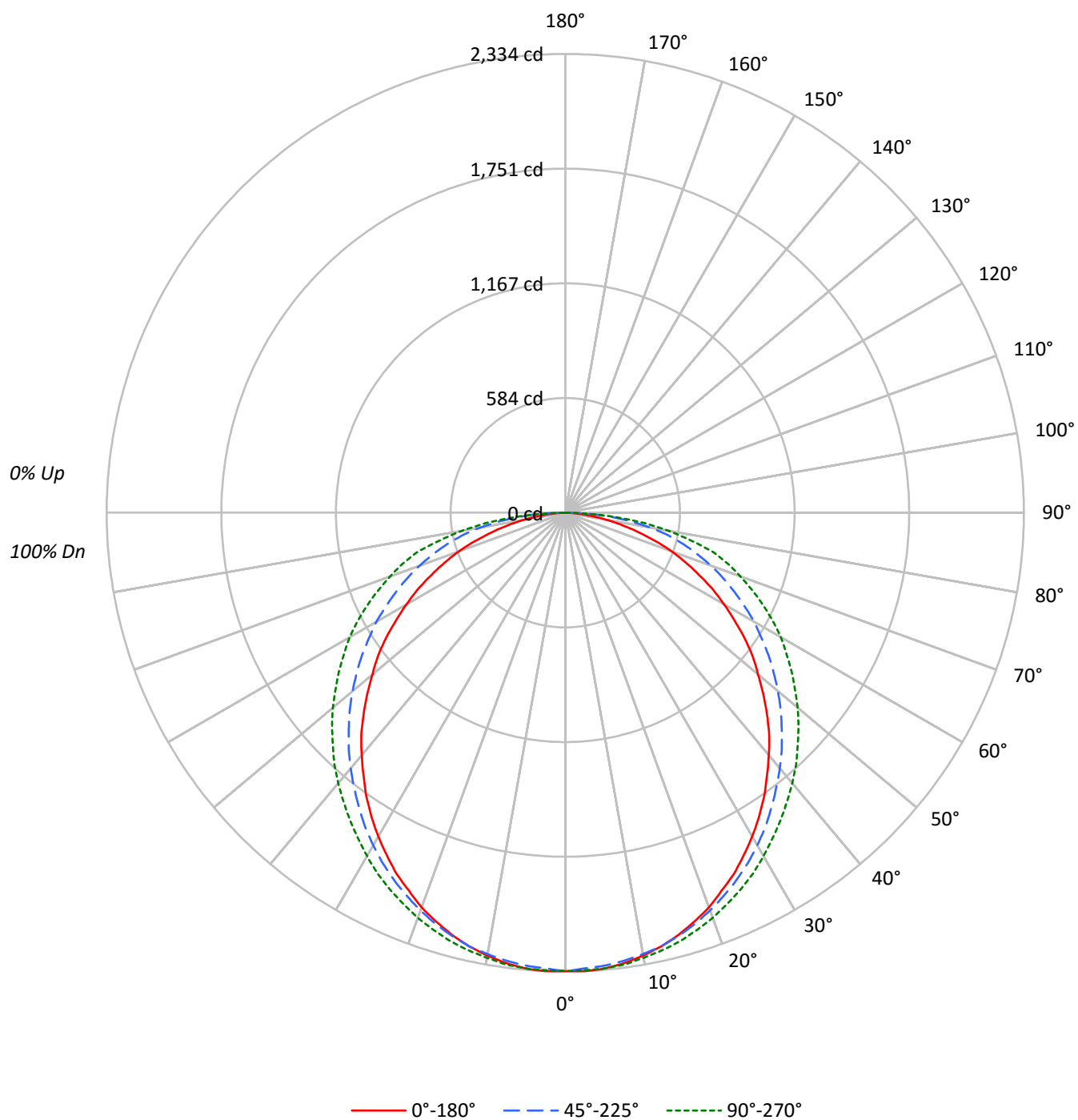
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3138	3138	3138
5°	3143	3124	3143
10°	3125	3115	3141
15°	3098	3104	3144
20°	3060	3084	3141
25°	3013	3062	3138
30°	2956	3036	3135
35°	2898	3006	3137
40°	2831	2983	3156
45°	2763	2964	3183
50°	2681	2956	3231
55°	2614	2961	3297
60°	2513	2986	3409
65°	2398	3018	3533
70°	2270	3110	3729
75°	2024	3244	4074
80°	1727	3436	4162
85°	1232	3404	3984



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.7	3.1
10°-20°	631.0	8.9
20°-30°	953.1	13.5
30°-40°	1148.7	16.2
40°-50°	1206.0	17.1
50°-60°	1128.3	16.0
60°-70°	931.7	13.2
70°-80°	634.9	9.0
80°-90°	216.5	3.1
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°	1804.9	25.5
0°-40°	2953.6	41.8
0°-60°	5287.8	74.8
0°-90°	7071.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7071.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2332	2332	2332	2332	2332	
5°	2327	2325	2313	2327	2327	221
15°	2224	2226	2229	2252	2257	627
25°	2029	2039	2062	2102	2114	934
35°	1764	1783	1830	1891	1910	1102
45°	1452	1483	1558	1642	1673	1120
55°	1114	1159	1262	1365	1405	995
65°	753	816	948	1067	1110	747
75°	389	479	624	741	784	415
85°	80	157	220	249	258	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2332.0	2332.0	2332.0	2332.0	2332.0
2.5°	2334.3	2332.0	2320.2	2332.0	2329.6
5°	2327.3	2324.9	2313.2	2327.3	2327.3
7.5°	2310.8	2310.8	2299.1	2315.5	2317.9
10°	2287.4	2287.4	2280.3	2299.1	2299.1
12.5°	2259.2	2259.2	2259.2	2278.0	2280.3
15°	2224.0	2226.4	2228.7	2252.2	2256.9
17.5°	2181.8	2186.5	2193.5	2221.7	2226.4
20°	2137.2	2141.9	2153.7	2186.5	2193.5
22.5°	2080.9	2092.7	2109.1	2146.6	2153.7
25°	2029.3	2038.7	2062.2	2102.0	2113.8
27.5°	1966.0	1980.0	2010.5	2052.8	2069.2
30°	1902.6	1916.7	1954.2	2003.5	2017.6
32.5°	1834.6	1855.7	1895.6	1947.2	1963.6
35°	1764.2	1783.0	1829.9	1890.9	1909.7
37.5°	1686.8	1712.6	1764.2	1829.9	1853.4
40°	1611.7	1639.9	1698.5	1768.9	1797.1
42.5°	1536.6	1564.8	1630.5	1710.3	1738.4
45°	1452.2	1482.7	1557.8	1642.2	1672.7
47.5°	1367.7	1405.3	1487.4	1576.5	1609.4
50°	1280.9	1323.2	1412.3	1506.2	1543.7
52.5°	1203.5	1243.4	1337.2	1438.1	1473.3
55°	1114.4	1158.9	1262.2	1365.4	1405.3
57.5°	1022.9	1072.1	1182.4	1295.0	1334.9
60°	933.7	987.7	1109.7	1222.3	1266.9
62.5°	846.9	900.9	1027.6	1144.9	1189.4
65°	753.1	816.4	947.8	1067.4	1109.7
67.5°	663.9	732.0	870.4	987.7	1029.9
70°	577.1	642.8	790.6	905.6	947.8
72.5°	483.3	558.4	706.2	825.8	870.4
75°	389.4	478.6	624.0	741.3	783.6
77.5°	302.6	394.1	539.6	635.8	656.9
80°	222.9	316.7	443.4	511.4	537.2
82.5°	143.1	236.9	337.8	387.1	408.2
85°	79.8	157.2	220.5	248.7	258.1
87.5°	32.8	68.0	89.1	100.9	100.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)