

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: P310452

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CA08-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: P310452
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" 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: 4833.0 lumens
Efficiency: N/A
Efficacy: 74.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

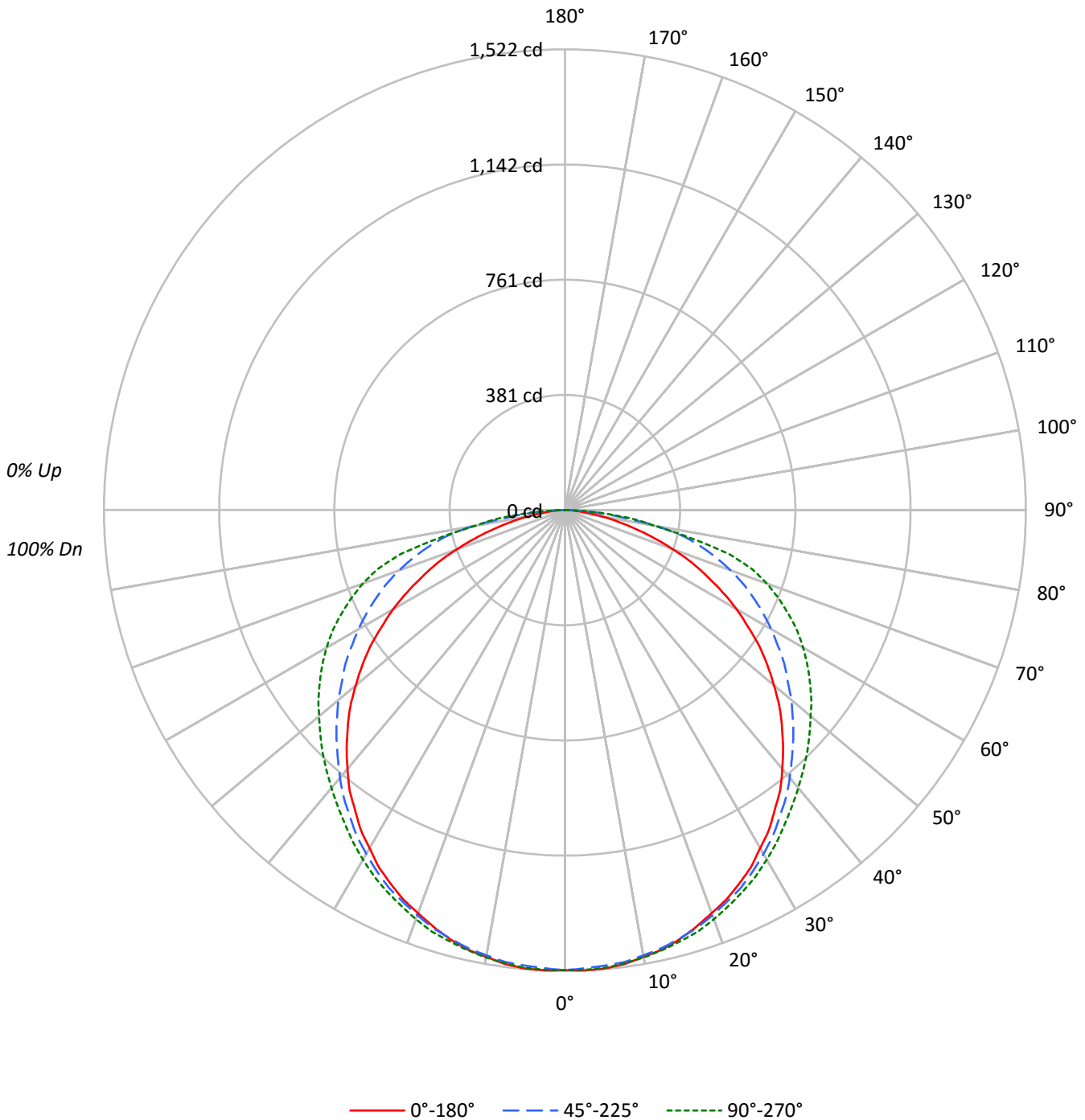
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2045	2045	2045
5°	2053	2040	2049
10°	2047	2040	2050
15°	2044	2040	2054
20°	2029	2039	2059
25°	2021	2043	2064
30°	2004	2037	2071
35°	1985	2032	2079
40°	1962	2030	2105
45°	1929	2030	2153
50°	1887	2042	2218
55°	1839	2075	2317
60°	1761	2116	2445
65°	1649	2190	2595
70°	1500	2292	2792
75°	1271	2418	2916
80°	1003	2433	2359
85°	739	1851	2072



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.2	3.0
10°-20°	414.9	8.6
20°-30°	634.5	13.1
30°-40°	775.7	16.0
40°-50°	826.7	17.1
50°-60°	790.4	16.4
60°-70°	669.6	13.9
70°-80°	450.0	9.3
80°-90°	126.9	2.6
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°	1193.6	24.7
0°-40°	1969.3	40.7
0°-60°	3586.4	74.2
0°-90°	4833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1520	1520	1520	1520	1520	
5°	1520	1517	1510	1517	1517	144
15°	1467	1467	1465	1477	1474	414
25°	1362	1366	1376	1388	1390	628
35°	1208	1218	1237	1261	1266	757
45°	1014	1031	1067	1112	1132	782
55°	784	813	885	954	988	698
65°	518	570	688	779	815	514
75°	244	333	465	544	561	262
85°	48	98	120	130	134	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1519.8	1519.8	1519.8	1519.8	1519.8
2.5°	1522.2	1522.2	1515.0	1519.8	1519.8
5°	1519.8	1517.4	1510.3	1517.4	1517.4
7.5°	1512.6	1510.3	1505.5	1512.6	1510.3
10°	1498.3	1498.3	1493.5	1500.7	1500.7
12.5°	1486.3	1483.9	1481.5	1491.1	1488.7
15°	1467.1	1467.1	1464.7	1476.7	1474.3
17.5°	1443.1	1445.5	1447.9	1457.5	1459.9
20°	1416.8	1421.6	1424.0	1438.3	1438.3
22.5°	1392.8	1395.2	1400.0	1414.4	1414.4
25°	1361.6	1366.4	1376.0	1388.0	1390.4
27.5°	1330.5	1332.9	1344.8	1361.6	1364.0
30°	1289.7	1296.9	1311.3	1330.5	1332.9
32.5°	1253.7	1260.9	1277.7	1296.9	1301.7
35°	1208.2	1217.8	1237.0	1260.9	1265.7
37.5°	1167.4	1174.6	1198.6	1225.0	1232.2
40°	1117.1	1131.5	1155.5	1186.6	1198.6
42.5°	1066.8	1081.1	1109.9	1150.7	1165.1
45°	1014.0	1030.8	1066.8	1112.3	1131.5
47.5°	961.3	980.5	1021.2	1074.0	1095.5
50°	901.4	925.3	975.7	1035.6	1059.6
52.5°	843.8	872.6	927.7	994.8	1026.0
55°	783.9	812.7	884.6	954.1	987.7
57.5°	716.8	755.1	834.2	913.3	949.3
60°	654.4	690.4	786.3	872.6	908.5
62.5°	587.3	635.3	738.3	829.4	865.4
65°	517.8	570.5	688.0	779.1	815.1
67.5°	455.5	513.0	637.7	728.8	764.7
70°	381.2	453.1	582.5	673.6	709.6
72.5°	311.6	390.7	525.0	613.7	647.3
75°	244.5	333.2	465.1	544.2	561.0
77.5°	182.2	275.7	402.7	436.3	424.3
80°	129.5	220.5	314.0	297.3	304.4
82.5°	83.9	167.8	194.2	220.5	227.7
85°	47.9	98.3	119.9	129.5	134.2
87.5°	21.6	36.0	47.9	47.9	45.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)