

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: P310451

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CA08-W2A-U-5500K**

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: P310451
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-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 4820.0 lumens
Efficiency: N/A
Efficacy: 74.6 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

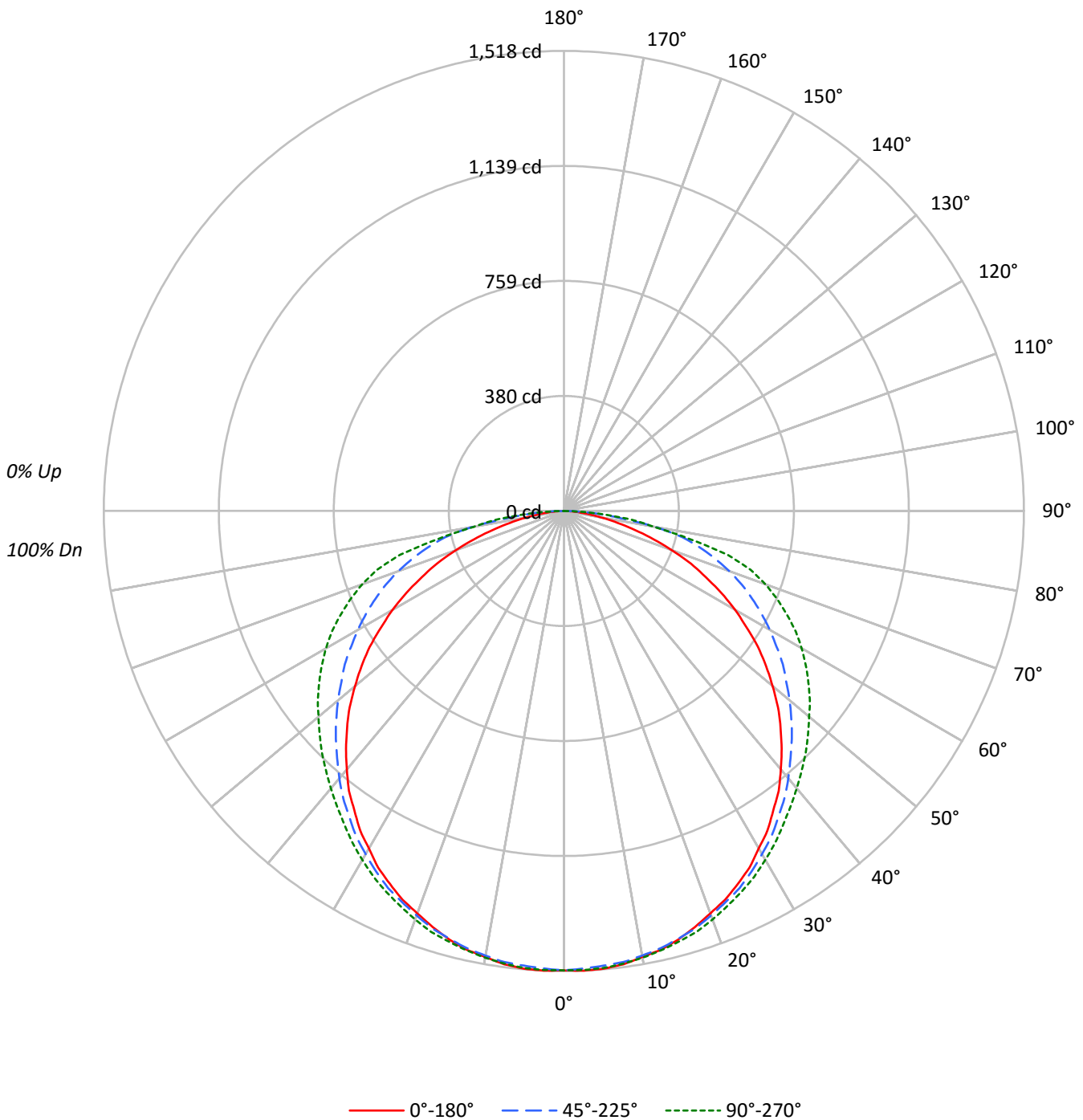
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2039	2039	2039
5°	2047	2034	2044
10°	2041	2035	2045
15°	2038	2035	2048
20°	2023	2033	2054
25°	2016	2037	2059
30°	1998	2032	2065
35°	1979	2026	2073
40°	1957	2024	2100
45°	1924	2024	2147
50°	1882	2037	2212
55°	1834	2069	2311
60°	1756	2110	2438
65°	1644	2185	2588
70°	1495	2286	2784
75°	1268	2411	2908
80°	1000	2427	2352
85°	738	1845	2067



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.8	3.0
10°-20°	413.8	8.6
20°-30°	632.8	13.1
30°-40°	773.6	16.0
40°-50°	824.5	17.1
50°-60°	788.3	16.4
60°-70°	667.8	13.9
70°-80°	448.8	9.3
80°-90°	126.6	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°	1190.4	24.7
0°-40°	1964.0	40.7
0°-60°	3576.8	74.2
0°-90°	4820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1516	1516	1516	1516	1516	
5°	1516	1513	1506	1513	1513	144
15°	1463	1463	1461	1473	1470	413
25°	1358	1363	1372	1384	1387	626
35°	1205	1214	1234	1258	1262	755
45°	1011	1028	1064	1109	1128	780
55°	782	810	882	952	985	696
65°	516	569	686	777	813	513
75°	244	332	464	543	559	261
85°	48	98	120	129	134	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1515.8	1515.8	1515.8	1515.8	1515.8
2.5°	1518.1	1518.1	1511.0	1515.8	1515.8
5°	1515.8	1513.4	1506.2	1513.4	1513.4
7.5°	1508.6	1506.2	1501.4	1508.6	1506.2
10°	1494.2	1494.2	1489.5	1496.6	1496.6
12.5°	1482.3	1479.9	1477.5	1487.1	1484.7
15°	1463.2	1463.2	1460.8	1472.7	1470.3
17.5°	1439.2	1441.6	1444.0	1453.6	1456.0
20°	1412.9	1417.7	1420.1	1434.5	1434.5
22.5°	1389.0	1391.4	1396.2	1410.6	1410.6
25°	1358.0	1362.7	1372.3	1384.3	1386.7
27.5°	1326.9	1329.3	1341.2	1358.0	1360.4
30°	1286.2	1293.4	1307.8	1326.9	1329.3
32.5°	1250.4	1257.5	1274.3	1293.4	1298.2
35°	1205.0	1214.5	1233.6	1257.5	1262.3
37.5°	1164.3	1171.5	1195.4	1221.7	1228.9
40°	1114.1	1128.4	1152.4	1183.4	1195.4
42.5°	1063.9	1078.2	1106.9	1147.6	1161.9
45°	1011.3	1028.0	1063.9	1109.3	1128.4
47.5°	958.7	977.8	1018.5	1071.1	1092.6
50°	898.9	922.8	973.0	1032.8	1056.7
52.5°	841.6	870.2	925.2	992.2	1023.3
55°	781.8	810.5	882.2	951.5	985.0
57.5°	714.8	753.1	832.0	910.9	946.7
60°	652.7	688.5	784.2	870.2	906.1
62.5°	585.7	633.6	736.4	827.2	863.1
65°	516.4	569.0	686.2	777.0	812.9
67.5°	454.2	511.6	635.9	726.8	762.7
70°	380.1	451.9	581.0	671.8	707.7
72.5°	310.8	389.7	523.6	612.0	645.5
75°	243.9	332.3	463.8	542.7	559.4
77.5°	181.7	274.9	401.7	435.1	423.2
80°	129.1	220.0	313.2	296.5	303.6
82.5°	83.7	167.4	193.7	220.0	227.1
85°	47.8	98.0	119.5	129.1	133.9
87.5°	21.5	35.9	47.8	47.8	45.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)