

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: P310454

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-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: P310454
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-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 4238.0 lumens
Efficiency: N/A
Efficacy: 67.5 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

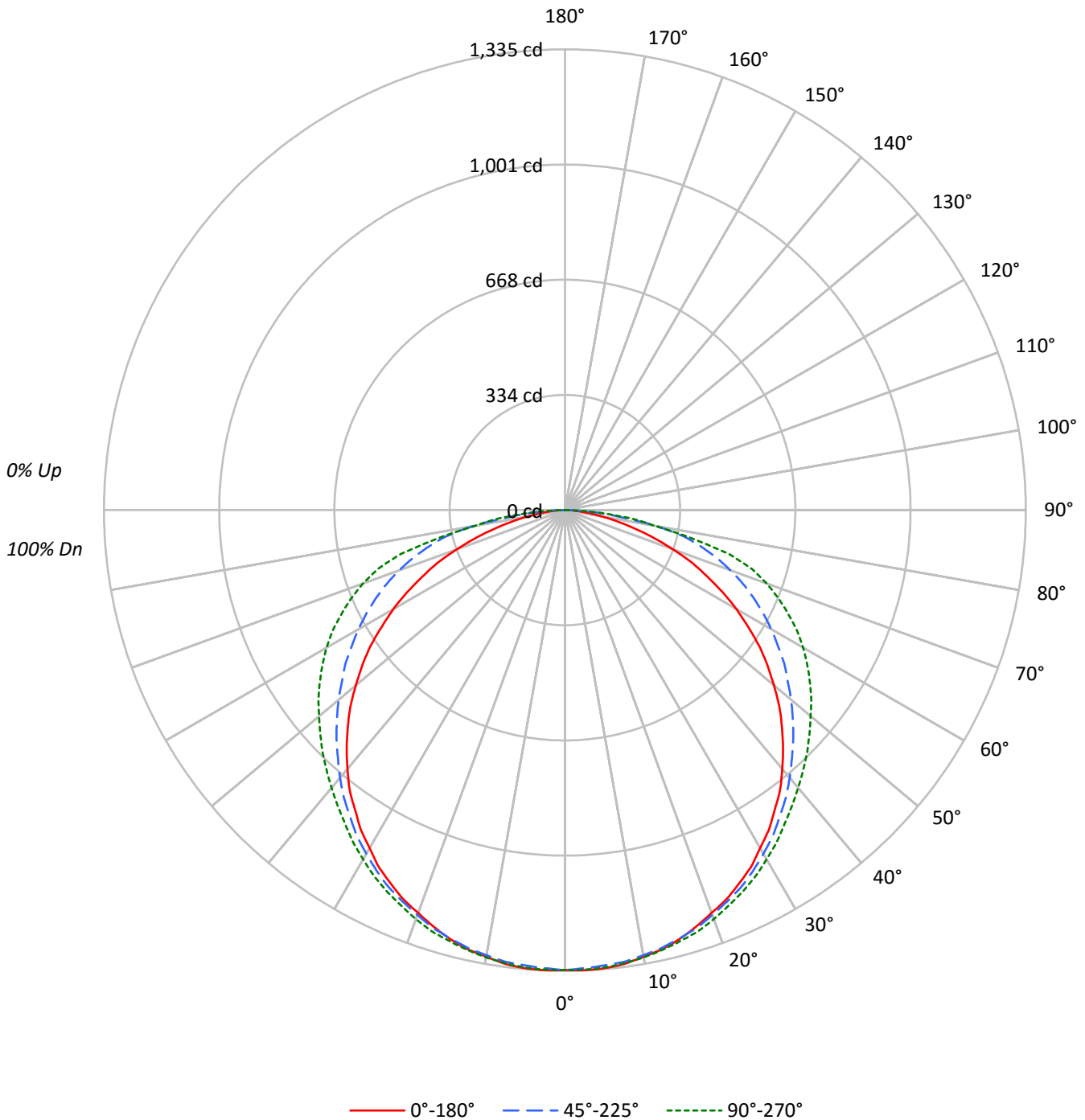
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1793	1793	1793
5°	1800	1789	1797
10°	1795	1789	1798
15°	1792	1789	1801
20°	1779	1788	1806
25°	1773	1791	1810
30°	1757	1786	1816
35°	1740	1782	1823
40°	1721	1780	1846
45°	1692	1780	1888
50°	1654	1791	1945
55°	1612	1820	2032
60°	1544	1855	2144
65°	1446	1921	2275
70°	1315	2009	2448
75°	1115	2120	2557
80°	879	2134	2069
85°	648	1623	1817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.4	3.0
10°-20°	363.8	8.6
20°-30°	556.4	13.1
30°-40°	680.2	16.0
40°-50°	724.9	17.1
50°-60°	693.1	16.4
60°-70°	587.2	13.9
70°-80°	394.6	9.3
80°-90°	111.3	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°	1046.7	24.7
0°-40°	1726.8	40.7
0°-60°	3144.9	74.2
0°-90°	4238.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4238.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1333	1333	1333	1333	1333	
5°	1333	1331	1324	1331	1331	127
15°	1286	1286	1284	1295	1293	363
25°	1194	1198	1207	1217	1219	550
35°	1060	1068	1085	1106	1110	664
45°	889	904	935	975	992	686
55°	687	713	776	837	866	612
65°	454	500	603	683	715	451
75°	214	292	408	477	492	230
85°	42	86	105	114	118	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1332.7	1332.7	1332.7	1332.7	1332.7
2.5°	1334.8	1334.8	1328.5	1332.7	1332.7
5°	1332.7	1330.6	1324.3	1330.6	1330.6
7.5°	1326.4	1324.3	1320.1	1326.4	1324.3
10°	1313.8	1313.8	1309.6	1315.9	1315.9
12.5°	1303.3	1301.2	1299.1	1307.5	1305.4
15°	1286.5	1286.5	1284.4	1294.9	1292.8
17.5°	1265.5	1267.6	1269.7	1278.1	1280.2
20°	1242.3	1246.5	1248.6	1261.3	1261.3
22.5°	1221.3	1223.4	1227.6	1240.2	1240.2
25°	1194.0	1198.2	1206.6	1217.1	1219.2
27.5°	1166.7	1168.8	1179.3	1194.0	1196.1
30°	1130.9	1137.2	1149.8	1166.7	1168.8
32.5°	1099.4	1105.7	1120.4	1137.2	1141.4
35°	1059.5	1067.9	1084.7	1105.7	1109.9
37.5°	1023.7	1030.0	1051.0	1074.2	1080.5
40°	979.6	992.2	1013.2	1040.5	1051.0
42.5°	935.4	948.0	973.3	1009.0	1021.6
45°	889.2	903.9	935.4	975.4	992.2
47.5°	842.9	859.8	895.5	941.7	960.7
50°	790.4	811.4	855.6	908.1	929.1
52.5°	739.9	765.2	813.5	872.4	899.7
55°	687.4	712.6	775.7	836.6	866.1
57.5°	628.5	662.2	731.5	800.9	832.4
60°	573.9	605.4	689.5	765.2	796.7
62.5°	515.0	557.1	647.4	727.3	758.9
65°	454.1	500.3	603.3	683.2	714.7
67.5°	399.4	449.8	559.2	639.0	670.6
70°	334.2	397.3	510.8	590.7	622.2
72.5°	273.3	342.6	460.4	538.1	567.6
75°	214.4	292.2	407.8	477.2	491.9
77.5°	159.8	241.7	353.2	382.6	372.1
80°	113.5	193.4	275.4	260.7	267.0
82.5°	73.6	147.1	170.3	193.4	199.7
85°	42.0	86.2	105.1	113.5	117.7
87.5°	18.9	31.5	42.0	42.0	39.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)