

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: P313723

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-CA125-W2A-U-4500K**

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: P313723
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: 24FCZ2-65HE-UNV-L83050-RDP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 4245.0 lumens
Efficiency: N/A
Efficacy: 76.9 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

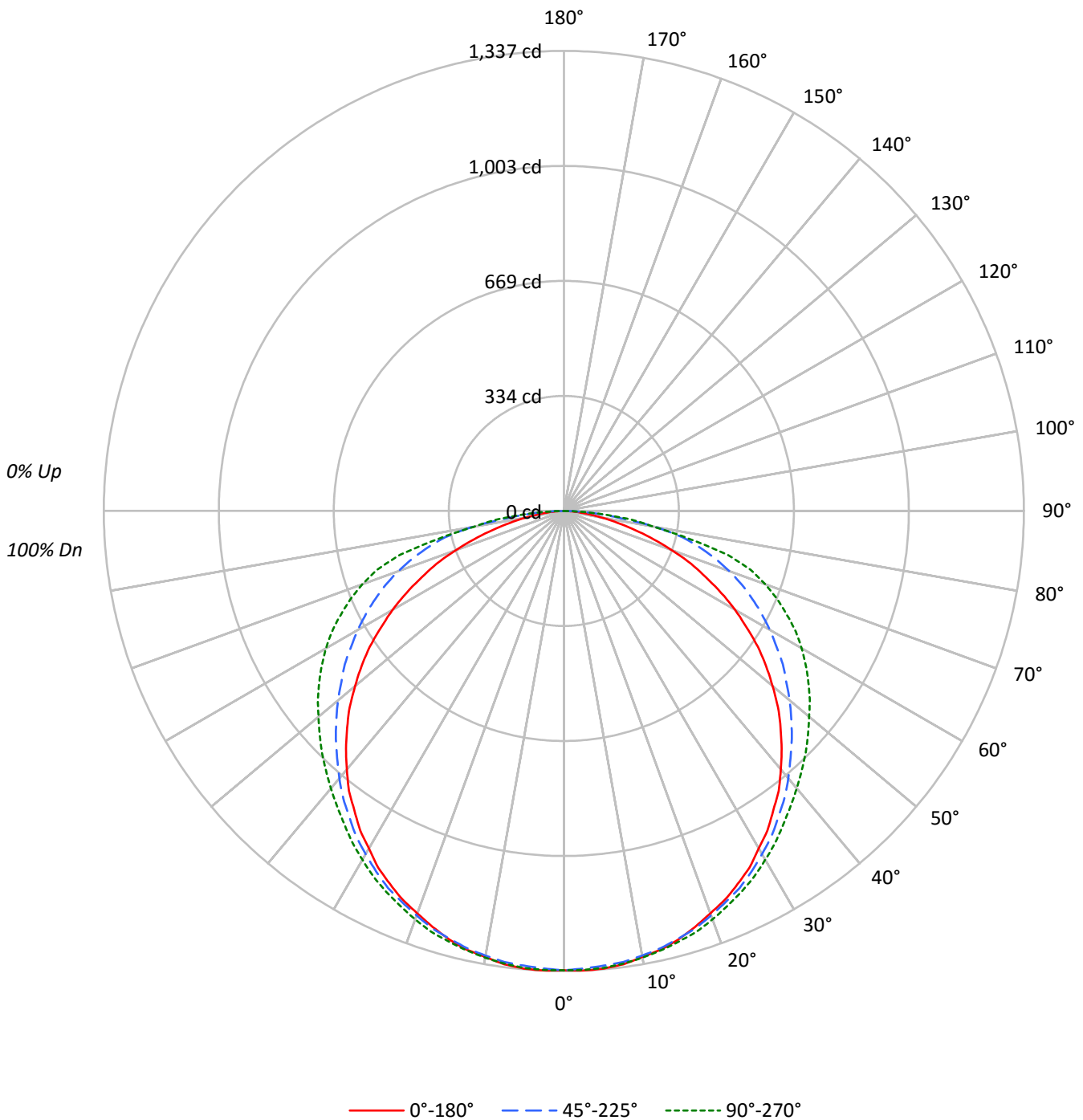
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	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	100	100	100	100	100		
	1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82	82	82	82	82	82		
	2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67	67	67	67	67	67		
	3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56	56	56	56	56	56		
	4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47	47	47	47	47	47		
	5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40	40	40	40	40	40		
	6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35	35	35	35	35	35		
	7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31	31	31	31	31	31		
	8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27	27	27	27	27	27		
	9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24	24	24	24	24	24		
	10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22	22	22	22	22	22		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1796	1796	1796
5°	1803	1792	1800
10°	1798	1792	1801
15°	1795	1792	1804
20°	1782	1791	1809
25°	1776	1794	1813
30°	1760	1789	1819
35°	1743	1785	1826
40°	1723	1783	1849
45°	1695	1783	1891
50°	1657	1794	1948
55°	1615	1823	2035
60°	1547	1858	2147
65°	1448	1924	2279
70°	1317	2013	2452
75°	1117	2124	2561
80°	881	2137	2072
85°	650	1626	1820



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.6	3.0
10°-20°	364.4	8.6
20°-30°	557.3	13.1
30°-40°	681.3	16.0
40°-50°	726.1	17.1
50°-60°	694.3	16.4
60°-70°	588.1	13.9
70°-80°	395.3	9.3
80°-90°	111.5	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°	1048.4	24.7
0°-40°	1729.7	40.7
0°-60°	3150.1	74.2
0°-90°	4245.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4245.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1335	1335	1335	1335	1335	
5°	1335	1333	1326	1333	1333	127
15°	1289	1289	1286	1297	1295	363
25°	1196	1200	1209	1219	1221	551
35°	1061	1070	1086	1108	1112	665
45°	891	905	937	977	994	687
55°	688	714	777	838	868	613
65°	455	501	604	684	716	452
75°	215	293	408	478	493	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°	1334.9	1334.9	1334.9	1334.9	1334.9
2.5°	1337.0	1337.0	1330.7	1334.9	1334.9
5°	1334.9	1332.8	1326.5	1332.8	1332.8
7.5°	1328.6	1326.5	1322.3	1328.6	1326.5
10°	1316.0	1316.0	1311.8	1318.1	1318.1
12.5°	1305.5	1303.3	1301.2	1309.7	1307.6
15°	1288.6	1288.6	1286.5	1297.0	1294.9
17.5°	1267.6	1269.7	1271.8	1280.2	1282.3
20°	1244.4	1248.6	1250.7	1263.3	1263.3
22.5°	1223.3	1225.4	1229.7	1242.3	1242.3
25°	1196.0	1200.2	1208.6	1219.1	1221.2
27.5°	1168.6	1170.7	1181.2	1196.0	1198.1
30°	1132.8	1139.1	1151.7	1168.6	1170.7
32.5°	1101.2	1107.5	1122.3	1139.1	1143.3
35°	1061.2	1069.6	1086.5	1107.5	1111.7
37.5°	1025.4	1031.7	1052.8	1075.9	1082.3
40°	981.2	993.8	1014.9	1042.3	1052.8
42.5°	937.0	949.6	974.9	1010.7	1023.3
45°	890.7	905.4	937.0	977.0	993.8
47.5°	844.3	861.2	897.0	943.3	962.2
50°	791.7	812.7	857.0	909.6	930.7
52.5°	741.2	766.4	814.9	873.8	901.2
55°	688.5	713.8	777.0	838.0	867.5
57.5°	629.6	663.3	732.7	802.2	833.8
60°	574.8	606.4	690.6	766.4	798.0
62.5°	515.9	558.0	648.5	728.5	760.1
65°	454.8	501.1	604.3	684.3	715.9
67.5°	400.1	450.6	560.1	640.1	671.7
70°	334.8	398.0	511.7	591.7	623.2
72.5°	273.7	343.2	461.1	539.0	568.5
75°	214.8	292.7	408.5	478.0	492.7
77.5°	160.0	242.1	353.7	383.2	372.7
80°	113.7	193.7	275.8	261.1	267.4
82.5°	73.7	147.4	170.6	193.7	200.0
85°	42.1	86.3	105.3	113.7	117.9
87.5°	19.0	31.6	42.1	42.1	40.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)