

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: P313727

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-CP125-W2A-U-4000K**

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: P313727
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 4123.0 lumens
Efficiency: N/A
Efficacy: 76.6 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

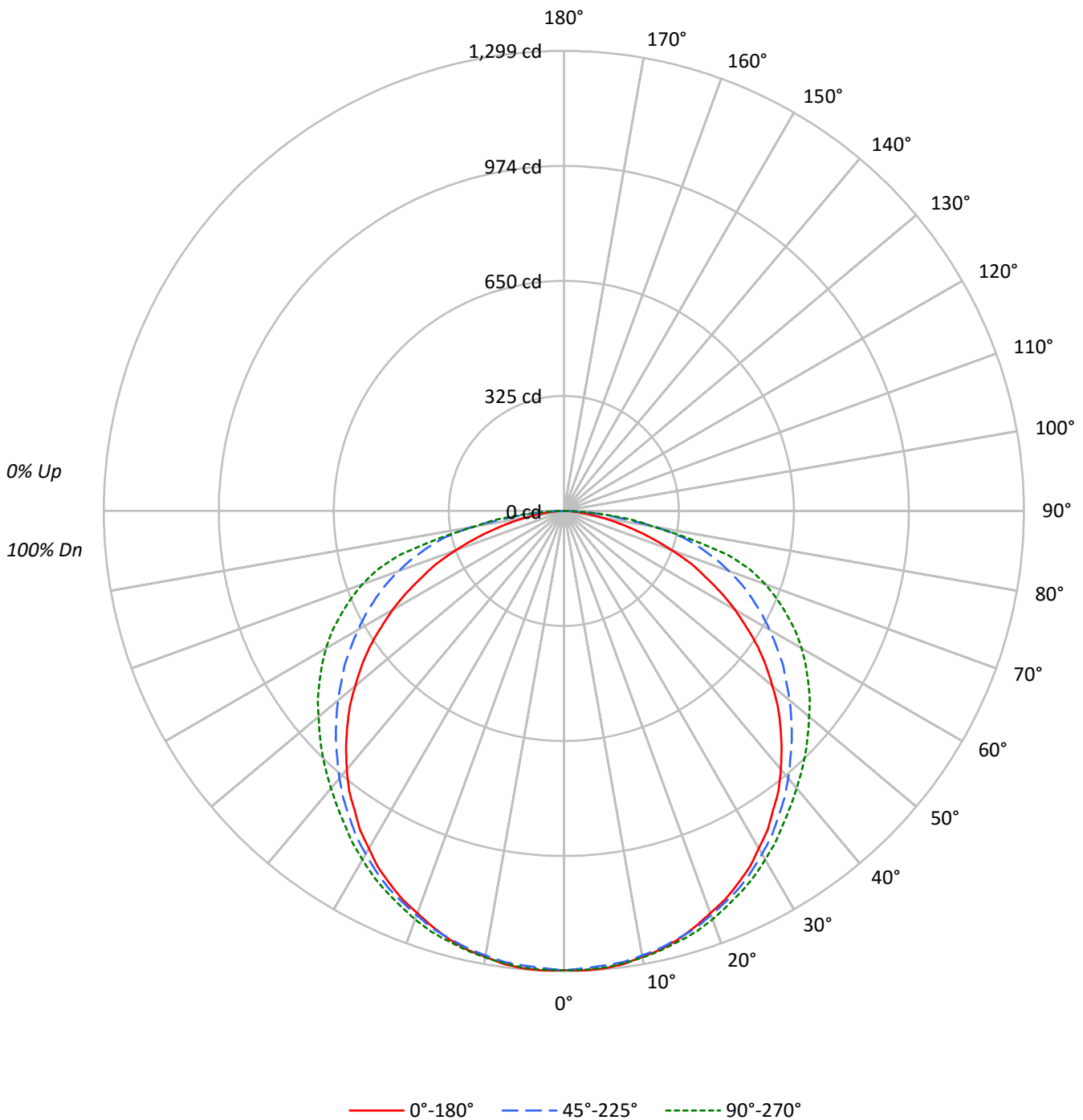
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1745	1745	1745
5°	1751	1740	1748
10°	1746	1741	1749
15°	1743	1740	1752
20°	1731	1739	1757
25°	1724	1743	1761
30°	1709	1738	1767
35°	1693	1733	1774
40°	1674	1731	1796
45°	1646	1732	1837
50°	1609	1742	1892
55°	1569	1770	1977
60°	1502	1805	2086
65°	1406	1869	2214
70°	1279	1955	2381
75°	1084	2062	2488
80°	855	2076	2012
85°	631	1579	1768



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	3.0
10°-20°	354.0	8.6
20°-30°	541.3	13.1
30°-40°	661.7	16.0
40°-50°	705.3	17.1
50°-60°	674.3	16.4
60°-70°	571.2	13.9
70°-80°	383.9	9.3
80°-90°	108.3	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°	1018.3	24.7
0°-40°	1680.0	40.7
0°-60°	3059.6	74.2
0°-90°	4123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4123.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1297	1297	1297	1297	1297	
5°	1297	1294	1288	1294	1294	123
15°	1252	1252	1250	1260	1258	353
25°	1162	1166	1174	1184	1186	535
35°	1031	1039	1055	1076	1080	646
45°	865	879	910	949	965	667
55°	669	693	755	814	843	596
65°	442	487	587	665	695	439
75°	209	284	397	464	478	223
85°	41	84	102	110	114	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1296.6	1296.6	1296.6	1296.6	1296.6
2.5°	1298.6	1298.6	1292.5	1296.6	1296.6
5°	1296.6	1294.5	1288.4	1294.5	1294.5
7.5°	1290.4	1288.4	1284.3	1290.4	1288.4
10°	1278.2	1278.2	1274.1	1280.2	1280.2
12.5°	1267.9	1265.9	1263.8	1272.0	1270.0
15°	1251.6	1251.6	1249.5	1259.8	1257.7
17.5°	1231.1	1233.2	1235.2	1243.4	1245.4
20°	1208.6	1212.7	1214.8	1227.0	1227.0
22.5°	1188.2	1190.2	1194.3	1206.6	1206.6
25°	1161.6	1165.7	1173.9	1184.1	1186.1
27.5°	1135.0	1137.1	1147.3	1161.6	1163.6
30°	1100.2	1106.4	1118.6	1135.0	1137.1
32.5°	1069.6	1075.7	1090.0	1106.4	1110.5
35°	1030.7	1038.9	1055.2	1075.7	1079.8
37.5°	995.9	1002.1	1022.5	1045.0	1051.2
40°	953.0	965.3	985.7	1012.3	1022.5
42.5°	910.1	922.3	946.9	981.6	993.9
45°	865.1	879.4	910.1	948.9	965.3
47.5°	820.1	836.4	871.2	916.2	934.6
50°	768.9	789.4	832.3	883.5	903.9
52.5°	719.9	744.4	791.4	848.7	875.3
55°	668.7	693.3	754.6	813.9	842.6
57.5°	611.5	644.2	711.7	779.2	809.8
60°	558.3	589.0	670.8	744.4	775.1
62.5°	501.0	541.9	629.9	707.6	738.3
65°	441.7	486.7	586.9	664.6	695.3
67.5°	388.6	437.6	544.0	621.7	652.4
70°	325.2	386.5	496.9	574.7	605.3
72.5°	265.9	333.3	447.9	523.5	552.2
75°	208.6	284.3	396.7	464.2	478.5
77.5°	155.4	235.2	343.6	372.2	362.0
80°	110.4	188.1	267.9	253.6	259.7
82.5°	71.6	143.2	165.6	188.1	194.3
85°	40.9	83.8	102.3	110.4	114.5
87.5°	18.4	30.7	40.9	40.9	38.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)