

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: P309689

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-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: P309689
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-L82765-HRP-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 4144.0 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

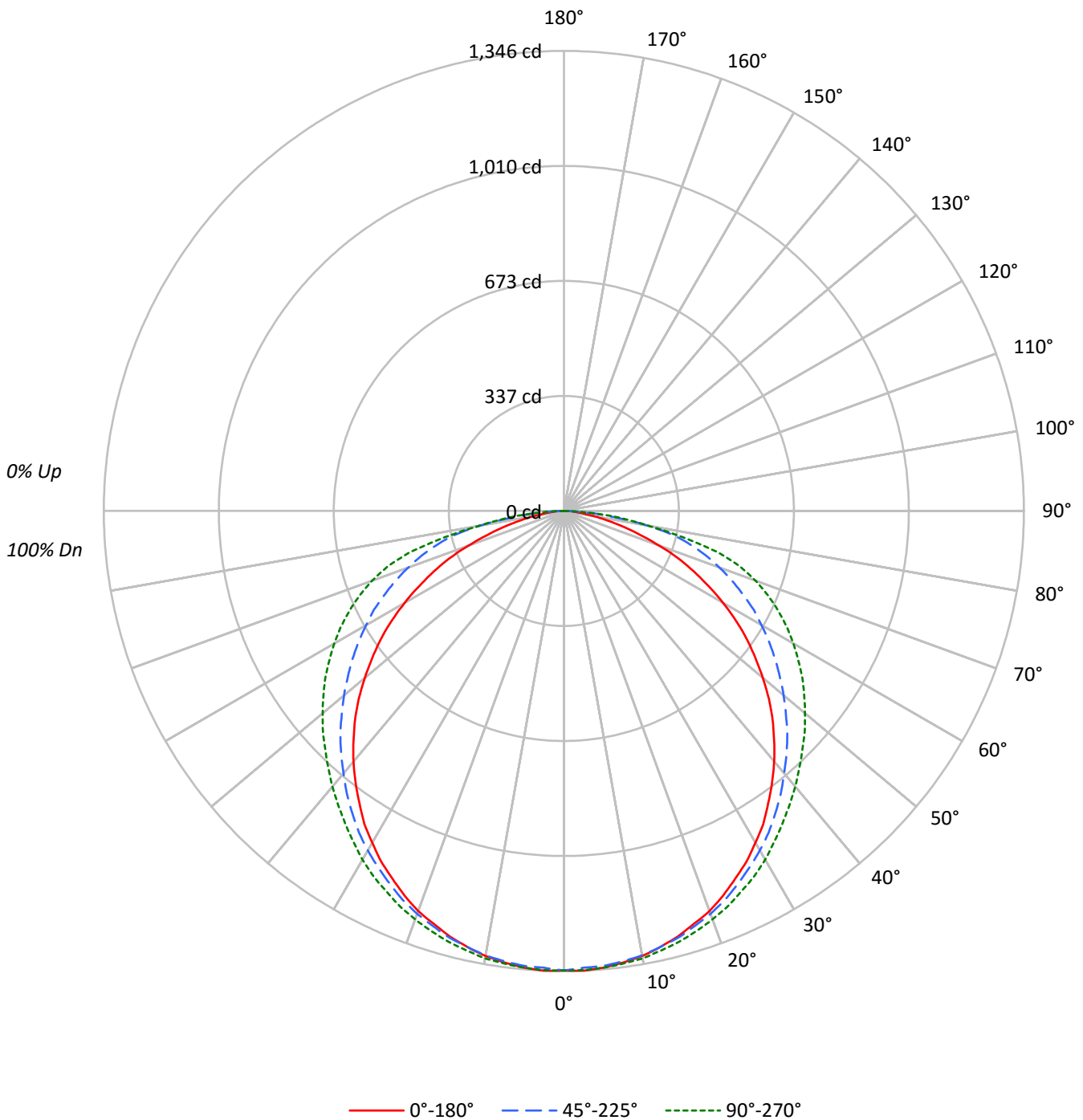
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1809	1809	1809
5°	1811	1804	1811
10°	1806	1804	1816
15°	1796	1800	1817
20°	1783	1796	1821
25°	1762	1787	1824
30°	1741	1782	1830
35°	1713	1772	1832
40°	1682	1761	1850
45°	1644	1760	1878
50°	1591	1758	1928
55°	1534	1770	1998
60°	1447	1797	2087
65°	1337	1839	2204
70°	1167	1904	2348
75°	947	2002	2426
80°	699	1963	1963
85°	536	1447	1633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.4	3.1
10°-20°	365.8	8.8
20°-30°	556.8	13.4
30°-40°	676.1	16.3
40°-50°	714.3	17.2
50°-60°	674.0	16.3
60°-70°	560.4	13.5
70°-80°	368.7	8.9
80°-90°	100.5	2.4
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°	1049.9	25.3
0°-40°	1726.0	41.7
0°-60°	3114.4	75.2
0°-90°	4144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4144.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1344	1344	1344	1344	1344	
5°	1341	1341	1336	1341	1341	127
15°	1289	1291	1292	1305	1305	364
25°	1187	1194	1204	1225	1228	547
35°	1043	1055	1079	1107	1116	653
45°	864	881	925	970	987	665
55°	654	682	755	826	852	583
65°	420	468	578	663	692	415
75°	182	265	385	456	467	196
85°	35	76	94	104	106	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1344.5	1344.5	1344.5	1344.5	1344.5
2.5°	1346.3	1344.5	1337.6	1344.5	1344.5
5°	1341.1	1341.1	1335.8	1341.1	1341.1
7.5°	1332.4	1332.4	1328.9	1335.8	1335.8
10°	1322.0	1322.0	1320.2	1328.9	1328.9
12.5°	1306.4	1308.1	1306.4	1316.8	1316.8
15°	1289.0	1290.7	1292.5	1304.6	1304.6
17.5°	1266.5	1269.9	1273.4	1287.3	1289.0
20°	1245.6	1247.4	1254.3	1269.9	1271.7
22.5°	1217.9	1223.1	1231.8	1247.4	1252.6
25°	1186.7	1193.6	1204.0	1224.8	1228.3
27.5°	1157.2	1162.4	1176.2	1198.8	1205.7
30°	1120.7	1129.4	1146.7	1169.3	1178.0
32.5°	1086.0	1094.7	1115.5	1139.8	1146.7
35°	1042.7	1054.8	1079.1	1106.8	1115.5
37.5°	1001.0	1013.2	1042.7	1073.9	1084.3
40°	957.6	971.5	1002.8	1039.2	1053.1
42.5°	910.8	929.9	964.6	1004.5	1020.1
45°	864.0	881.3	924.7	969.8	987.1
47.5°	813.7	834.5	881.3	935.1	955.9
50°	759.9	785.9	839.7	898.7	921.2
52.5°	706.1	735.6	796.3	862.2	886.5
55°	654.0	681.8	754.7	825.8	851.8
57.5°	596.8	631.5	711.3	787.6	813.7
60°	537.8	576.0	667.9	747.7	775.5
62.5°	478.8	522.2	626.3	706.1	735.6
65°	419.8	468.4	577.7	662.7	692.2
67.5°	362.6	416.4	532.6	617.6	647.1
70°	296.7	364.3	484.0	567.3	596.8
72.5°	235.9	314.0	437.2	515.3	541.3
75°	182.2	265.4	385.1	456.3	466.7
77.5°	133.6	216.9	331.4	355.6	357.4
80°	90.2	173.5	253.3	249.8	253.3
82.5°	59.0	130.1	159.6	178.7	180.4
85°	34.7	76.3	93.7	104.1	105.8
87.5°	17.3	26.0	33.0	34.7	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)