

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: P309699

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP125-W2A-U-3000K**

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: P309699
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-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (336) 3000K 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: 4182.0 lumens
Efficiency: N/A
Efficacy: 80.1 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

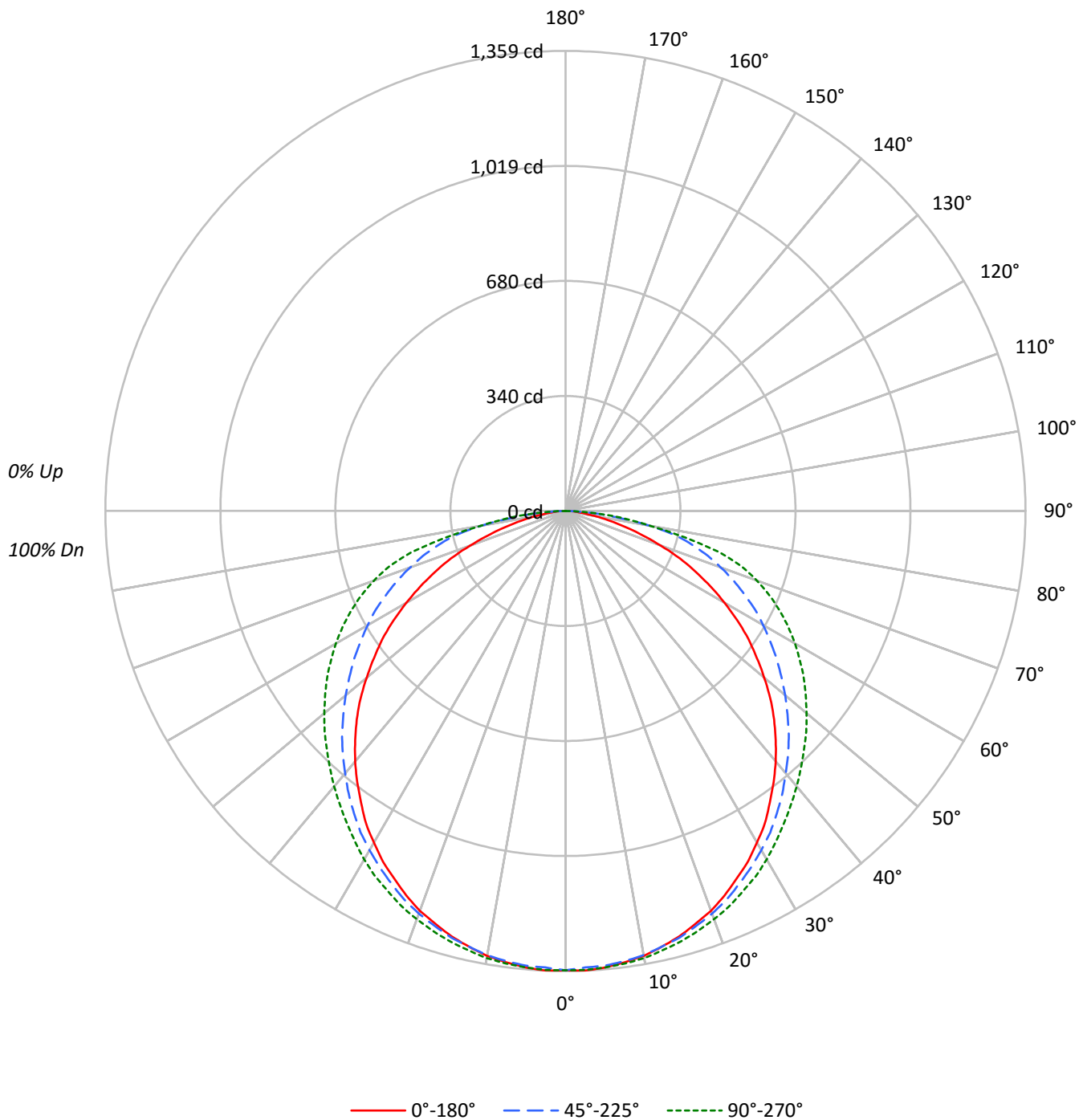
Input Watts (W): 52.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1826	1826	1826
5°	1828	1821	1828
10°	1823	1820	1832
15°	1812	1817	1834
20°	1800	1812	1837
25°	1778	1804	1840
30°	1757	1798	1847
35°	1728	1789	1849
40°	1697	1777	1867
45°	1659	1776	1896
50°	1605	1774	1946
55°	1548	1787	2016
60°	1460	1814	2106
65°	1349	1856	2224
70°	1178	1922	2369
75°	955	2021	2449
80°	705	1980	1980
85°	540	1459	1649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.5	3.1
10°-20°	369.1	8.8
20°-30°	561.9	13.4
30°-40°	682.3	16.3
40°-50°	720.9	17.2
50°-60°	680.2	16.3
60°-70°	565.6	13.5
70°-80°	372.1	8.9
80°-90°	101.4	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°	1059.6	25.3
0°-40°	1741.9	41.7
0°-60°	3142.9	75.2
0°-90°	4182.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4182.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1357	1357	1357	1357	1357	
5°	1353	1353	1348	1353	1353	129
15°	1301	1303	1304	1317	1317	367
25°	1198	1204	1215	1236	1240	552
35°	1052	1064	1089	1117	1126	659
45°	872	889	933	979	996	671
55°	660	688	762	833	860	588
65°	424	473	583	669	699	419
75°	184	268	389	460	471	198
85°	35	77	94	105	107	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1356.9	1356.9	1356.9	1356.9	1356.9
2.5°	1358.6	1356.9	1349.9	1356.9	1356.9
5°	1353.4	1353.4	1348.1	1353.4	1353.4
7.5°	1344.6	1344.6	1341.1	1348.1	1348.1
10°	1334.1	1334.1	1332.3	1341.1	1341.1
12.5°	1318.3	1320.1	1318.3	1328.8	1328.8
15°	1300.8	1302.6	1304.3	1316.6	1316.6
17.5°	1278.1	1281.6	1285.1	1299.1	1300.8
20°	1257.1	1258.8	1265.8	1281.6	1283.3
22.5°	1229.0	1234.3	1243.1	1258.8	1264.1
25°	1197.5	1204.5	1215.0	1236.0	1239.6
27.5°	1167.8	1173.0	1187.0	1209.8	1216.8
30°	1131.0	1139.8	1157.3	1180.0	1188.8
32.5°	1096.0	1104.7	1125.8	1150.3	1157.3
35°	1052.2	1064.5	1089.0	1117.0	1125.8
37.5°	1010.2	1022.5	1052.2	1083.7	1094.2
40°	966.4	980.4	1011.9	1048.7	1062.7
42.5°	919.2	938.4	973.4	1013.7	1029.5
45°	871.9	889.4	933.2	978.7	996.2
47.5°	821.1	842.1	889.4	943.7	964.7
50°	766.8	793.1	847.4	906.9	929.7
52.5°	712.6	742.3	803.6	870.1	894.6
55°	660.0	688.1	761.6	833.4	859.6
57.5°	602.3	637.3	717.8	794.9	821.1
60°	542.7	581.3	674.0	754.6	782.6
62.5°	483.2	527.0	632.0	712.6	742.3
65°	423.7	472.7	583.0	668.8	698.6
67.5°	365.9	420.2	537.5	623.3	653.0
70°	299.4	367.7	488.5	572.5	602.3
72.5°	238.1	316.9	441.2	520.0	546.2
75°	183.8	267.9	388.7	460.5	471.0
77.5°	134.8	218.8	334.4	358.9	360.7
80°	91.0	175.1	255.6	252.1	255.6
82.5°	59.5	131.3	161.1	180.3	182.1
85°	35.0	77.0	94.5	105.0	106.8
87.5°	17.5	26.3	33.3	35.0	38.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)