

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: P309718

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP250-W2A-U-3500K**

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: P309718
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-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 3500K 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: 4109.0 lumens
Efficiency: N/A
Efficacy: 77.8 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

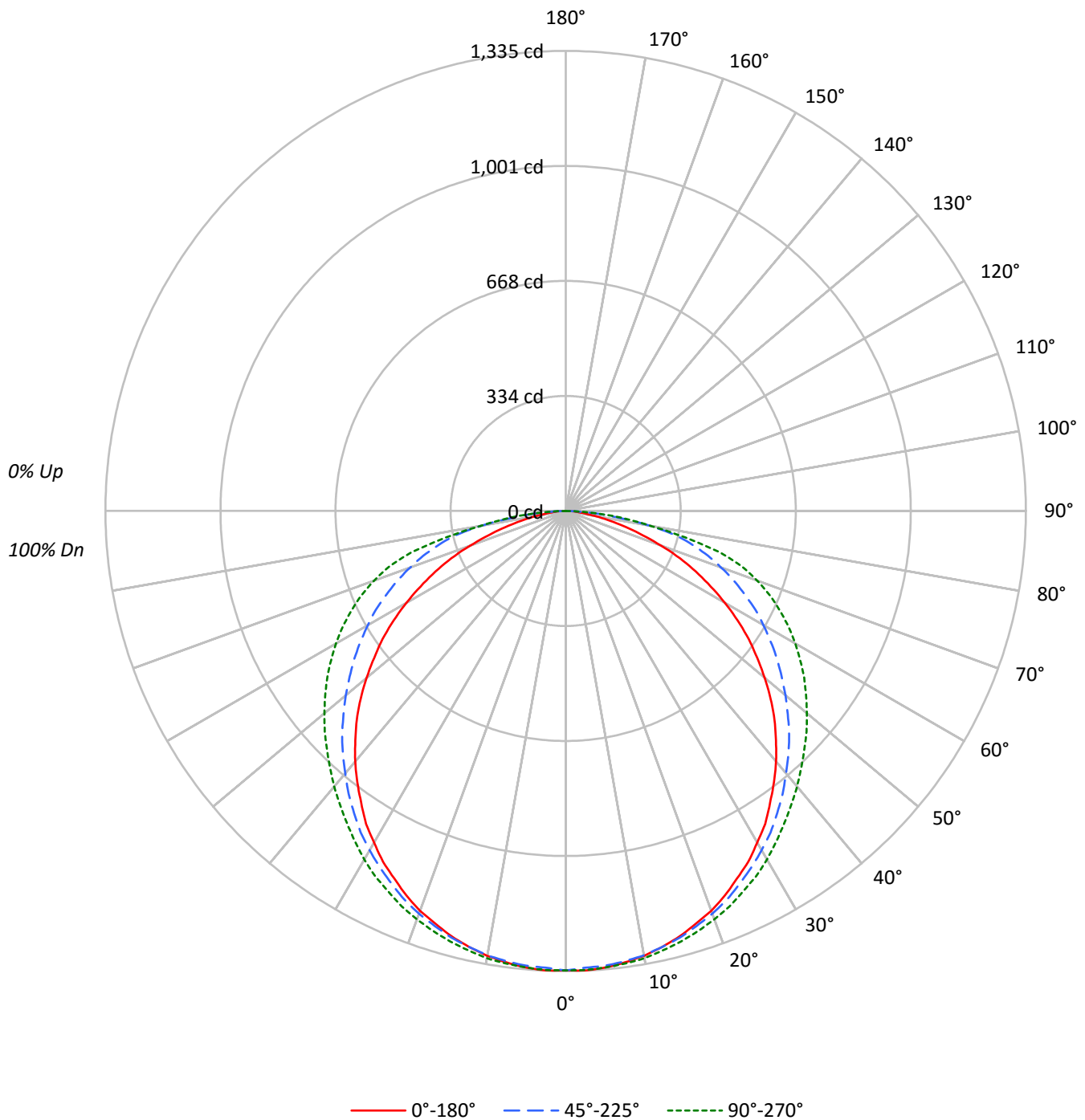
Input Watts (W): 52.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1794	1794	1794
5°	1796	1789	1796
10°	1791	1789	1800
15°	1780	1785	1802
20°	1768	1781	1805
25°	1747	1772	1808
30°	1727	1767	1815
35°	1698	1758	1817
40°	1668	1746	1834
45°	1630	1745	1862
50°	1577	1743	1912
55°	1521	1755	1981
60°	1435	1782	2069
65°	1325	1824	2185
70°	1157	1888	2328
75°	939	1985	2405
80°	693	1946	1946
85°	531	1434	1619



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.3	3.1
10°-20°	362.7	8.8
20°-30°	552.1	13.4
30°-40°	670.4	16.3
40°-50°	708.3	17.2
50°-60°	668.3	16.3
60°-70°	555.7	13.5
70°-80°	365.6	8.9
80°-90°	99.7	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°	1041.1	25.3
0°-40°	1711.5	41.7
0°-60°	3088.1	75.2
0°-90°	4109.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4109.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1333	1333	1333	1333	1333	
5°	1330	1330	1325	1330	1330	126
15°	1278	1280	1282	1294	1294	360
25°	1177	1184	1194	1214	1218	543
35°	1034	1046	1070	1098	1106	647
45°	857	874	917	962	979	660
55°	648	676	748	819	845	578
65°	416	464	573	657	686	412
75°	181	263	382	452	463	195
85°	34	76	93	103	105	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1333.2	1333.2	1333.2	1333.2	1333.2
2.5°	1334.9	1333.2	1326.3	1333.2	1333.2
5°	1329.7	1329.7	1324.6	1329.7	1329.7
7.5°	1321.1	1321.1	1317.7	1324.6	1324.6
10°	1310.8	1310.8	1309.1	1317.7	1317.7
12.5°	1295.3	1297.0	1295.3	1305.6	1305.6
15°	1278.1	1279.8	1281.6	1293.6	1293.6
17.5°	1255.8	1259.2	1262.6	1276.4	1278.1
20°	1235.1	1236.8	1243.7	1259.2	1260.9
22.5°	1207.6	1212.8	1221.4	1236.8	1242.0
25°	1176.6	1183.5	1193.8	1214.5	1217.9
27.5°	1147.4	1152.5	1166.3	1188.7	1195.6
30°	1111.3	1119.9	1137.1	1159.4	1168.0
32.5°	1076.9	1085.5	1106.1	1130.2	1137.1
35°	1033.9	1045.9	1070.0	1097.5	1106.1
37.5°	992.6	1004.6	1033.9	1064.8	1075.1
40°	949.6	963.3	994.3	1030.4	1044.2
42.5°	903.1	922.0	956.4	996.0	1011.5
45°	856.7	873.9	916.9	961.6	978.8
47.5°	806.8	827.4	873.9	927.2	947.8
50°	753.5	779.3	832.6	891.1	913.4
52.5°	700.1	729.4	789.6	854.9	879.0
55°	648.5	676.0	748.3	818.8	844.6
57.5°	591.8	626.2	705.3	781.0	806.8
60°	533.3	571.1	662.3	741.4	768.9
62.5°	474.8	517.8	621.0	700.1	729.4
65°	416.3	464.5	572.8	657.1	686.4
67.5°	359.5	412.9	528.1	612.4	641.6
70°	294.2	361.2	479.9	562.5	591.8
72.5°	233.9	311.4	433.5	510.9	536.7
75°	180.6	263.2	381.9	452.4	462.7
77.5°	132.5	215.0	328.6	352.6	354.4
80°	89.5	172.0	251.2	247.7	251.2
82.5°	58.5	129.0	158.3	177.2	178.9
85°	34.4	75.7	92.9	103.2	104.9
87.5°	17.2	25.8	32.7	34.4	37.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)