

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: P310363

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CA08-W2A-U-6500K**

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: P310363
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-L82765-RDP-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 6500K 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: 4201.0 lumens
Efficiency: N/A
Efficacy: 76.5 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

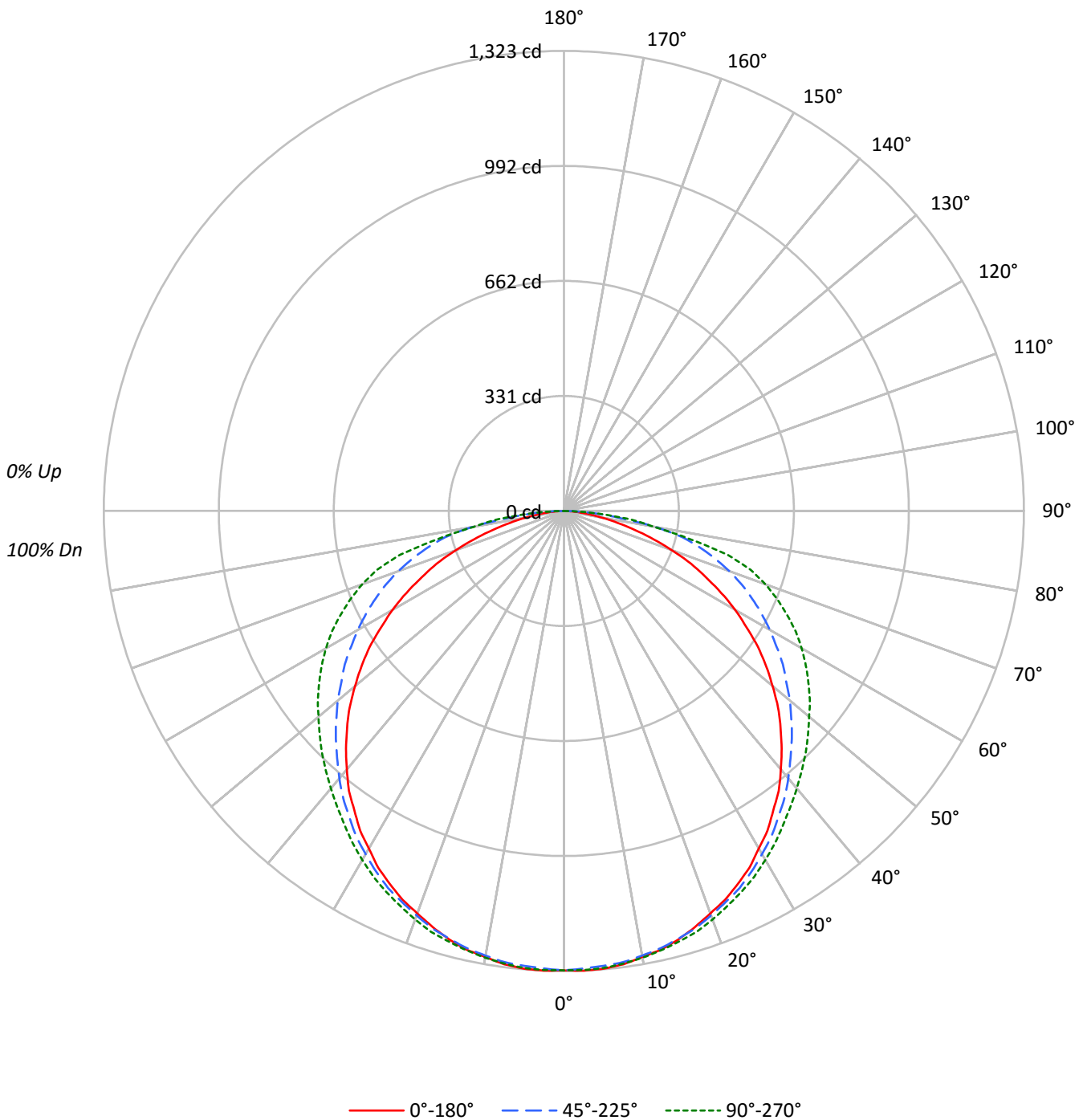
Input Watts (W): 54.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1778	1778	1778
5°	1784	1773	1781
10°	1779	1774	1782
15°	1776	1774	1785
20°	1763	1772	1790
25°	1757	1776	1794
30°	1742	1771	1800
35°	1725	1766	1807
40°	1705	1764	1830
45°	1677	1764	1871
50°	1640	1775	1928
55°	1598	1804	2014
60°	1531	1839	2125
65°	1433	1904	2256
70°	1303	1992	2426
75°	1105	2101	2535
80°	872	2115	2050
85°	644	1609	1802



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.3	3.0
10°-20°	360.7	8.6
20°-30°	551.5	13.1
30°-40°	674.2	16.0
40°-50°	718.6	17.1
50°-60°	687.1	16.4
60°-70°	582.0	13.9
70°-80°	391.2	9.3
80°-90°	110.4	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°	1037.5	24.7
0°-40°	1711.8	40.7
0°-60°	3117.5	74.2
0°-90°	4201.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4201.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1321	1321	1321	1321	1321	
5°	1321	1319	1313	1319	1319	126
15°	1275	1275	1273	1284	1282	360
25°	1184	1188	1196	1206	1209	546
35°	1050	1058	1075	1096	1100	658
45°	881	896	927	967	984	680
55°	681	706	769	829	858	607
65°	450	496	598	677	708	447
75°	212	290	404	473	488	228
85°	42	85	104	112	117	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1321.1	1321.1	1321.1	1321.1	1321.1
2.5°	1323.2	1323.2	1316.9	1321.1	1321.1
5°	1321.1	1319.0	1312.8	1319.0	1319.0
7.5°	1314.8	1312.8	1308.6	1314.8	1312.8
10°	1302.3	1302.3	1298.2	1304.4	1304.4
12.5°	1291.9	1289.8	1287.8	1296.1	1294.0
15°	1275.3	1275.3	1273.2	1283.6	1281.5
17.5°	1254.4	1256.5	1258.6	1266.9	1269.0
20°	1231.5	1235.7	1237.7	1250.2	1250.2
22.5°	1210.7	1212.7	1216.9	1229.4	1229.4
25°	1183.6	1187.7	1196.1	1206.5	1208.6
27.5°	1156.5	1158.6	1169.0	1183.6	1185.7
30°	1121.1	1127.3	1139.8	1156.5	1158.6
32.5°	1089.8	1096.1	1110.6	1127.3	1131.5
35°	1050.2	1058.5	1075.2	1096.1	1100.2
37.5°	1014.8	1021.0	1041.9	1064.8	1071.0
40°	971.0	983.5	1004.4	1031.5	1041.9
42.5°	927.3	939.8	964.8	1000.2	1012.7
45°	881.4	896.0	927.3	966.9	983.5
47.5°	835.6	852.3	887.7	933.5	952.3
50°	783.5	804.3	848.1	900.2	921.0
52.5°	733.5	758.5	806.4	864.8	891.8
55°	681.4	706.4	768.9	829.3	858.5
57.5°	623.0	656.4	725.1	793.9	825.2
60°	568.9	600.1	683.5	758.5	789.7
62.5°	510.5	552.2	641.8	721.0	752.2
65°	450.1	495.9	598.0	677.2	708.5
67.5°	395.9	445.9	554.3	633.5	664.7
70°	331.3	393.8	506.4	585.5	616.8
72.5°	270.9	339.7	456.3	533.4	562.6
75°	212.5	289.6	404.2	473.0	487.6
77.5°	158.4	239.6	350.1	379.2	368.8
80°	112.5	191.7	273.0	258.4	264.6
82.5°	72.9	145.9	168.8	191.7	198.0
85°	41.7	85.4	104.2	112.5	116.7
87.5°	18.8	31.3	41.7	41.7	39.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)