

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: P313353

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-HRP-CP125-W2A-U-4500K**

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: P313353
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-L83050-HRP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 4808.0 lumens
Efficiency: N/A
Efficacy: 87.1 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

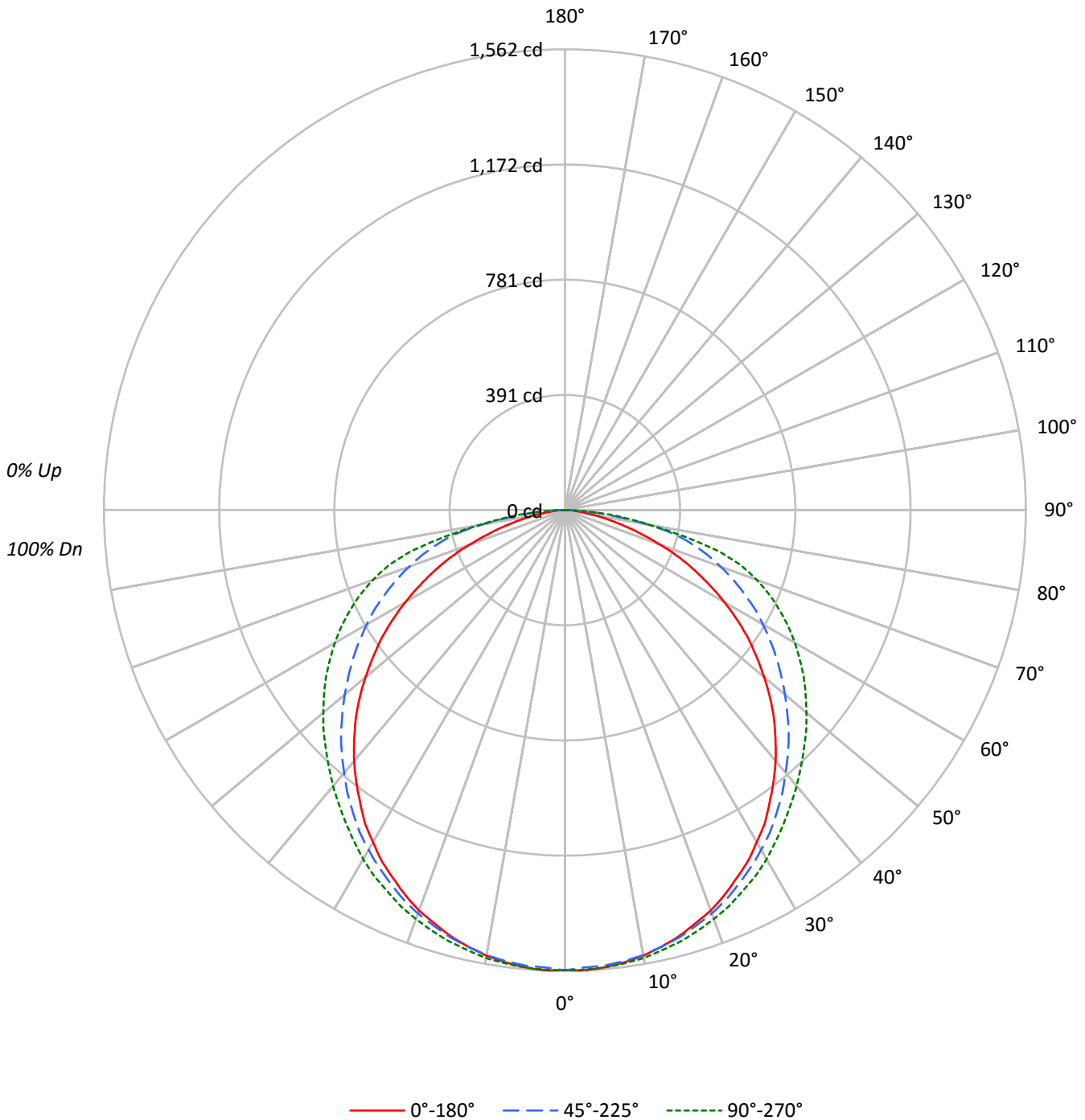
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2099	2099	2099
5°	2101	2093	2101
10°	2096	2093	2106
15°	2083	2089	2109
20°	2069	2084	2113
25°	2044	2074	2116
30°	2020	2067	2123
35°	1987	2056	2126
40°	1952	2043	2146
45°	1907	2041	2179
50°	1845	2039	2237
55°	1780	2054	2318
60°	1679	2085	2421
65°	1551	2134	2557
70°	1354	2209	2724
75°	1098	2323	2815
80°	811	2277	2277
85°	622	1678	1896



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.8	3.1
10°-20°	424.4	8.8
20°-30°	646.0	13.4
30°-40°	784.4	16.3
40°-50°	828.7	17.2
50°-60°	782.0	16.3
60°-70°	650.2	13.5
70°-80°	427.8	8.9
80°-90°	116.6	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°	1218.2	25.3
0°-40°	2002.6	41.7
0°-60°	3613.4	75.2
0°-90°	4808.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4808.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1560	1560	1560	1560	1560	
5°	1556	1556	1550	1556	1556	148
15°	1496	1498	1500	1514	1514	422
25°	1377	1385	1397	1421	1425	635
35°	1210	1224	1252	1284	1294	757
45°	1002	1022	1073	1125	1145	772
55°	759	791	876	958	988	676
65°	487	544	670	769	803	482
75°	211	308	447	529	542	228
85°	40	89	109	121	123	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1560.0	1560.0	1560.0	1560.0	1560.0
2.5°	1562.0	1560.0	1551.9	1560.0	1560.0
5°	1555.9	1555.9	1549.9	1555.9	1555.9
7.5°	1545.9	1545.9	1541.8	1549.9	1549.9
10°	1533.8	1533.8	1531.8	1541.8	1541.8
12.5°	1515.7	1517.7	1515.7	1527.8	1527.8
15°	1495.5	1497.6	1499.6	1513.7	1513.7
17.5°	1469.4	1473.4	1477.4	1493.5	1495.5
20°	1445.2	1447.2	1455.3	1473.4	1475.4
22.5°	1413.0	1419.1	1429.1	1447.2	1453.3
25°	1376.8	1384.8	1396.9	1421.1	1425.1
27.5°	1342.6	1348.6	1364.7	1390.9	1398.9
30°	1300.3	1310.4	1330.5	1356.7	1366.7
32.5°	1260.0	1270.1	1294.3	1322.4	1330.5
35°	1209.7	1223.8	1252.0	1284.2	1294.3
37.5°	1161.4	1175.5	1209.7	1246.0	1258.0
40°	1111.1	1127.2	1163.4	1205.7	1221.8
42.5°	1056.7	1078.9	1119.1	1165.4	1183.6
45°	1002.4	1022.5	1072.8	1125.2	1145.3
47.5°	944.0	968.2	1022.5	1084.9	1109.1
50°	881.6	911.8	974.2	1042.7	1068.8
52.5°	819.2	853.4	923.9	1000.4	1028.6
55°	758.8	791.1	875.6	958.1	988.3
57.5°	692.4	732.7	825.3	913.8	944.0
60°	624.0	668.3	774.9	867.5	899.7
62.5°	555.5	605.9	726.6	819.2	853.4
65°	487.1	543.5	670.3	768.9	803.1
67.5°	420.7	483.1	617.9	716.6	750.8
70°	344.2	422.7	561.6	658.2	692.4
72.5°	273.7	364.3	507.2	597.8	628.0
75°	211.3	308.0	446.9	529.4	541.5
77.5°	155.0	251.6	384.5	412.6	414.6
80°	104.7	201.3	293.9	289.9	293.9
82.5°	68.4	151.0	185.2	207.3	209.3
85°	40.3	88.6	108.7	120.8	122.8
87.5°	20.1	30.2	38.2	40.3	44.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)