

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: P313347

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-HRP-CA125-W2A-U-4000K**

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: P313347
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 4857.0 lumens
Efficiency: N/A
Efficacy: 90.3 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

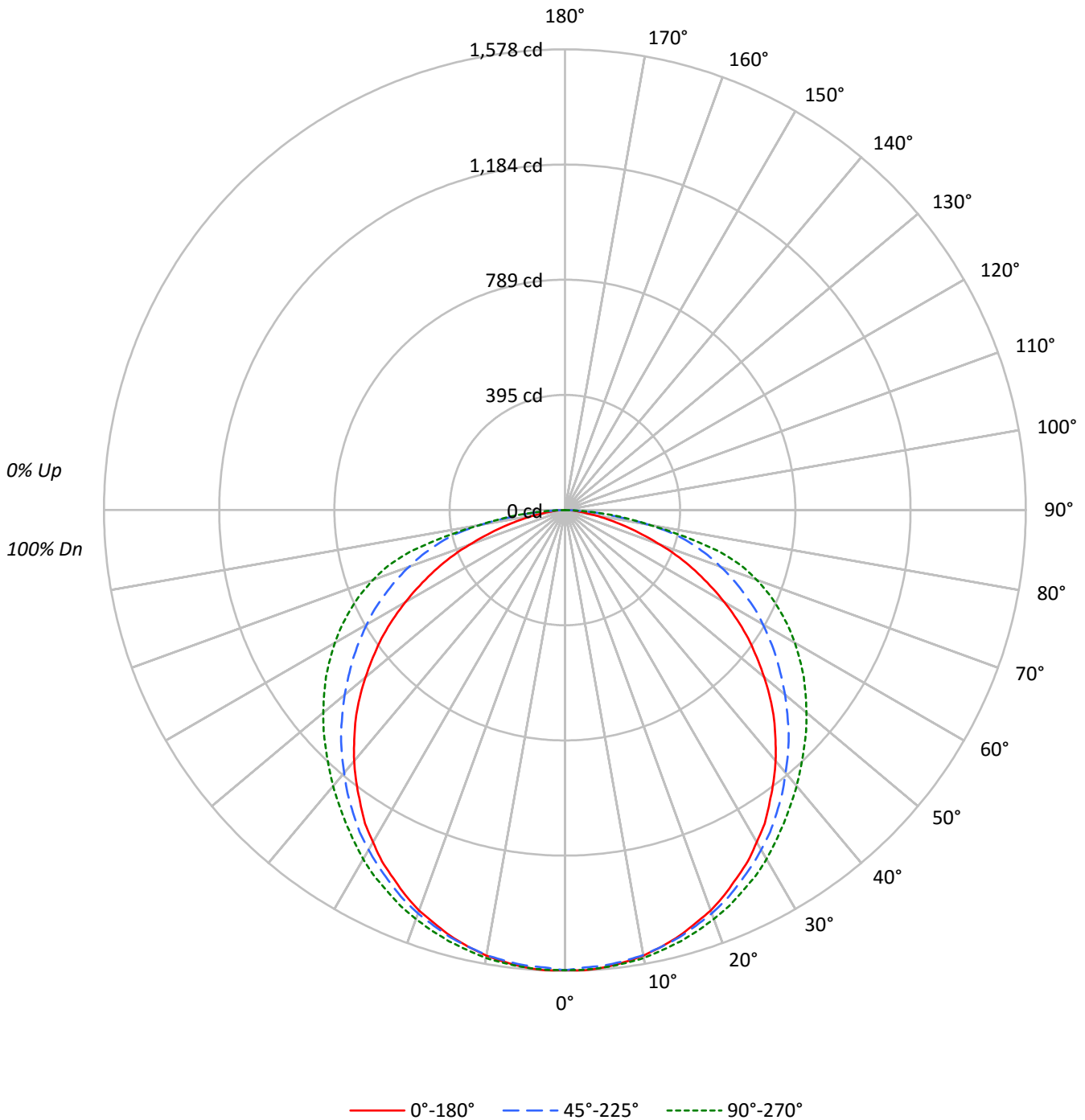
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2120	2120	2120
5°	2123	2115	2123
10°	2117	2114	2128
15°	2104	2110	2130
20°	2090	2105	2134
25°	2065	2095	2137
30°	2041	2088	2145
35°	2007	2077	2148
40°	1971	2064	2168
45°	1927	2062	2202
50°	1864	2060	2260
55°	1798	2075	2342
60°	1696	2106	2446
65°	1567	2156	2583
70°	1368	2232	2752
75°	1110	2347	2844
80°	819	2300	2300
85°	628	1695	1914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.3	3.1
10°-20°	428.7	8.8
20°-30°	652.6	13.4
30°-40°	792.5	16.3
40°-50°	837.2	17.2
50°-60°	790.0	16.3
60°-70°	656.8	13.5
70°-80°	432.1	8.9
80°-90°	117.8	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°	1230.6	25.3
0°-40°	2023.0	41.7
0°-60°	3650.2	75.2
0°-90°	4857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1576	1576	1576	1576	1576	
5°	1572	1572	1566	1572	1572	149
15°	1511	1513	1515	1529	1529	426
25°	1391	1399	1411	1436	1440	642
35°	1222	1236	1265	1297	1308	765
45°	1013	1033	1084	1137	1157	780
55°	767	799	884	968	998	683
65°	492	549	677	777	811	486
75°	214	311	451	535	547	230
85°	41	90	110	122	124	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1575.9	1575.9	1575.9	1575.9	1575.9
2.5°	1577.9	1575.9	1567.7	1575.9	1575.9
5°	1571.8	1571.8	1565.7	1571.8	1571.8
7.5°	1561.6	1561.6	1557.6	1565.7	1565.7
10°	1549.4	1549.4	1547.4	1557.6	1557.6
12.5°	1531.1	1533.2	1531.1	1543.3	1543.3
15°	1510.8	1512.8	1514.9	1529.1	1529.1
17.5°	1484.4	1488.4	1492.5	1508.8	1510.8
20°	1460.0	1462.0	1470.1	1488.4	1490.5
22.5°	1427.4	1433.5	1443.7	1462.0	1468.1
25°	1390.8	1399.0	1411.2	1435.6	1439.6
27.5°	1356.3	1362.4	1378.6	1405.1	1413.2
30°	1313.6	1323.7	1344.1	1370.5	1380.7
32.5°	1272.9	1283.1	1307.5	1335.9	1344.1
35°	1222.1	1236.3	1264.8	1297.3	1307.5
37.5°	1173.3	1187.5	1222.1	1258.7	1270.9
40°	1122.4	1138.7	1175.3	1218.0	1234.3
42.5°	1067.5	1089.9	1130.6	1177.3	1195.6
45°	1012.6	1032.9	1083.8	1136.7	1157.0
47.5°	953.6	978.0	1032.9	1096.0	1120.4
50°	890.6	921.1	984.1	1053.3	1079.7
52.5°	827.6	862.1	933.3	1010.6	1039.0
55°	766.6	799.1	884.5	967.9	998.4
57.5°	699.5	740.1	833.7	923.1	953.6
60°	630.3	675.1	782.8	876.4	908.9
62.5°	561.2	612.0	734.0	827.6	862.1
65°	492.1	549.0	677.1	776.7	811.3
67.5°	425.0	488.0	624.2	723.9	758.4
70°	347.7	427.0	567.3	664.9	699.5
72.5°	276.5	368.0	512.4	603.9	634.4
75°	213.5	311.1	451.4	534.8	547.0
77.5°	156.6	254.2	388.4	416.8	418.9
80°	105.7	203.3	296.9	292.8	296.9
82.5°	69.1	152.5	187.1	209.4	211.5
85°	40.7	89.5	109.8	122.0	124.0
87.5°	20.3	30.5	38.6	40.7	44.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)