

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: P313362

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-HRP-CP250-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: P313362  
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-CP250-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"  
POLYCARB 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**

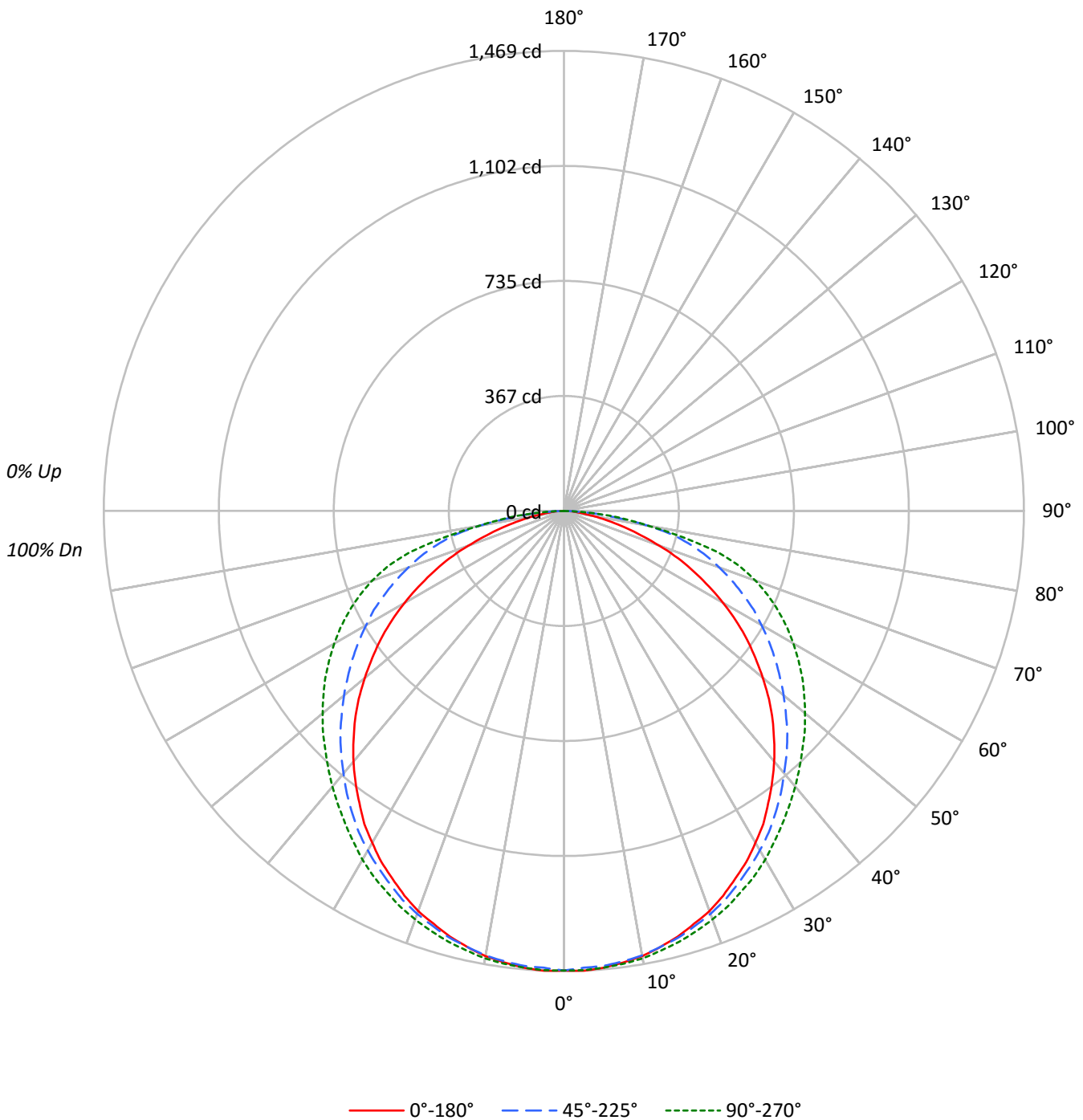
Lumens per Lamp: N/A  
Luminaire Lumens: 4523.0 lumens  
Efficiency: N/A  
Efficacy: 84.1 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1975	1975	1975
5°	1977	1969	1977
10°	1971	1969	1982
15°	1960	1965	1983
20°	1947	1960	1987
25°	1923	1951	1990
30°	1900	1945	1998
35°	1869	1935	2000
40°	1836	1922	2019
45°	1794	1921	2050
50°	1736	1918	2105
55°	1675	1932	2181
60°	1580	1962	2278
65°	1459	2007	2405
70°	1274	2078	2563
75°	1033	2185	2648
80°	763	2142	2142
85°	585	1579	1783



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.0	3.1
10°-20°	399.2	8.8
20°-30°	607.7	13.4
30°-40°	737.9	16.3
40°-50°	779.6	17.2
50°-60°	735.7	16.3
60°-70°	611.7	13.5
70°-80°	402.4	8.9
80°-90°	109.7	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°	1146.0	25.3
0°-40°	1883.9	41.7
0°-60°	3399.2	75.2
0°-90°	4523.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4523.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1468	1468	1468	1468	1468	
5°	1464	1464	1458	1464	1464	139
15°	1407	1409	1411	1424	1424	397
25°	1295	1303	1314	1337	1341	597
35°	1138	1151	1178	1208	1218	712
45°	943	962	1009	1058	1077	726
55°	714	744	824	901	930	636
65°	458	511	630	723	756	453
75°	199	290	420	498	509	214
85°	38	83	102	114	116	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1467.5	1467.5	1467.5	1467.5	1467.5
2.5°	1469.4	1467.5	1459.9	1467.5	1467.5
5°	1463.7	1463.7	1458.0	1463.7	1463.7
7.5°	1454.2	1454.2	1450.4	1458.0	1458.0
10°	1442.9	1442.9	1441.0	1450.4	1450.4
12.5°	1425.8	1427.7	1425.8	1437.2	1437.2
15°	1406.9	1408.8	1410.7	1423.9	1423.9
17.5°	1382.3	1386.1	1389.9	1405.0	1406.9
20°	1359.6	1361.5	1369.0	1386.1	1388.0
22.5°	1329.3	1334.9	1344.4	1361.5	1367.1
25°	1295.2	1302.8	1314.1	1336.8	1340.6
27.5°	1263.0	1268.7	1283.8	1308.4	1316.0
30°	1223.2	1232.7	1251.6	1276.2	1285.7
32.5°	1185.4	1194.8	1217.5	1244.1	1251.6
35°	1138.0	1151.3	1177.8	1208.1	1217.5
37.5°	1092.6	1105.8	1138.0	1172.1	1183.5
40°	1045.2	1060.4	1094.5	1134.2	1149.4
42.5°	994.1	1014.9	1052.8	1096.4	1113.4
45°	943.0	961.9	1009.3	1058.5	1077.4
47.5°	888.1	910.8	961.9	1020.6	1043.3
50°	829.4	857.8	916.5	980.9	1005.5
52.5°	770.7	802.9	869.1	941.1	967.6
55°	713.9	744.2	823.7	901.3	929.7
57.5°	651.4	689.2	776.4	859.7	888.1
60°	587.0	628.7	729.0	816.1	846.4
62.5°	522.6	570.0	683.6	770.7	802.9
65°	458.2	511.3	630.5	723.3	755.5
67.5°	395.7	454.4	581.3	674.1	706.3
70°	323.8	397.6	528.3	619.2	651.4
72.5°	257.5	342.7	477.2	562.4	590.8
75°	198.8	289.7	420.4	498.0	509.4
77.5°	145.8	236.7	361.7	388.2	390.1
80°	98.5	189.4	276.5	272.7	276.5
82.5°	64.4	142.0	174.2	195.0	196.9
85°	37.9	83.3	102.3	113.6	115.5
87.5°	18.9	28.4	36.0	37.9	41.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)