

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: P310484

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-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: P310484
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: 24FCZ2-75HE-UNV-L82765-RDP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 4294.0 lumens
Efficiency: N/A
Efficacy: 67.6 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

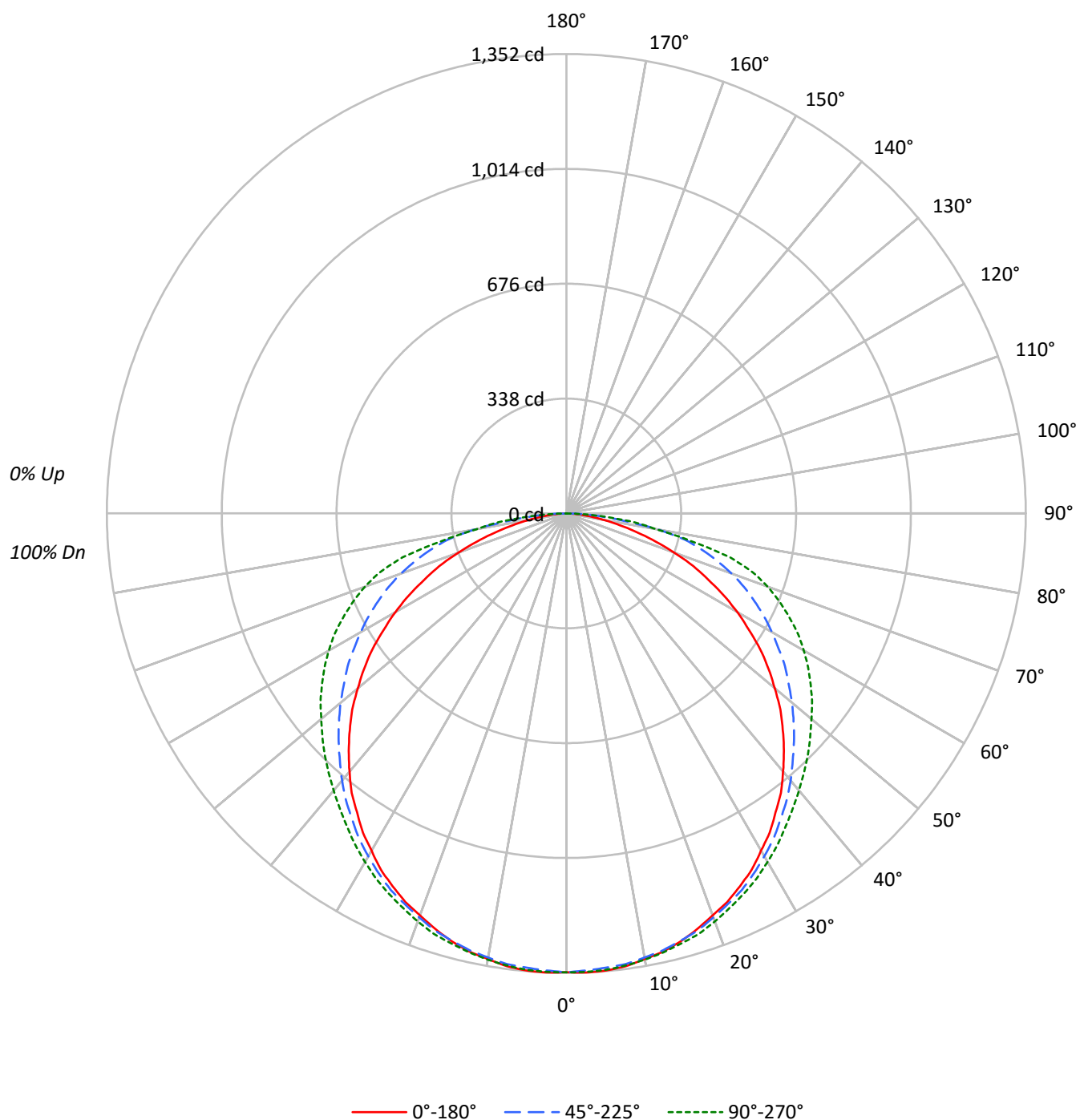
Input Watts (W): 63.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	68	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1817	1817	1817
5°	1824	1812	1821
10°	1819	1813	1822
15°	1816	1813	1825
20°	1802	1811	1830
25°	1796	1815	1834
30°	1780	1810	1840
35°	1763	1805	1847
40°	1743	1803	1870
45°	1714	1803	1913
50°	1676	1815	1971
55°	1634	1844	2058
60°	1565	1880	2172
65°	1465	1946	2306
70°	1332	2036	2480
75°	1129	2148	2591
80°	891	2162	2096
85°	658	1644	1842



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.1	3.0
10°-20°	368.7	8.6
20°-30°	563.7	13.1
30°-40°	689.2	16.0
40°-50°	734.5	17.1
50°-60°	702.3	16.4
60°-70°	594.9	13.9
70°-80°	399.8	9.3
80°-90°	112.8	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°	1060.5	24.7
0°-40°	1749.6	40.7
0°-60°	3186.4	74.2
0°-90°	4294.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4294.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1350	1348	1342	1348	1348	128
15°	1304	1304	1301	1312	1310	368
25°	1210	1214	1222	1233	1235	558
35°	1074	1082	1099	1120	1125	672
45°	901	916	948	988	1005	695
55°	696	722	786	848	878	620
65°	460	507	611	692	724	457
75°	217	296	413	484	498	233
85°	43	87	106	115	119	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1350.3	1350.3	1350.3	1350.3	1350.3
2.5°	1352.5	1352.5	1346.1	1350.3	1350.3
5°	1350.3	1348.2	1341.8	1348.2	1348.2
7.5°	1344.0	1341.8	1337.6	1344.0	1341.8
10°	1331.2	1331.2	1326.9	1333.3	1333.3
12.5°	1320.5	1318.4	1316.3	1324.8	1322.7
15°	1303.5	1303.5	1301.4	1312.0	1309.9
17.5°	1282.2	1284.3	1286.4	1295.0	1297.1
20°	1258.8	1263.0	1265.1	1277.9	1277.9
22.5°	1237.5	1239.6	1243.8	1256.6	1256.6
25°	1209.8	1214.0	1222.5	1233.2	1235.3
27.5°	1182.1	1184.2	1194.9	1209.8	1211.9
30°	1145.9	1152.3	1165.0	1182.1	1184.2
32.5°	1113.9	1120.3	1135.2	1152.3	1156.5
35°	1073.5	1082.0	1099.0	1120.3	1124.6
37.5°	1037.2	1043.6	1064.9	1088.4	1094.8
40°	992.5	1005.3	1026.6	1054.3	1064.9
42.5°	947.8	960.6	986.1	1022.3	1035.1
45°	900.9	915.8	947.8	988.3	1005.3
47.5°	854.1	871.1	907.3	954.2	973.4
50°	800.8	822.1	866.9	920.1	941.4
52.5°	749.7	775.3	824.3	883.9	911.6
55°	696.5	722.0	785.9	847.7	877.5
57.5°	636.8	670.9	741.2	811.5	843.4
60°	581.5	613.4	698.6	775.3	807.2
62.5°	521.8	564.4	656.0	736.9	768.9
65°	460.1	506.9	611.3	692.2	724.2
67.5°	404.7	455.8	566.5	647.5	679.4
70°	338.7	402.5	517.6	598.5	630.4
72.5°	276.9	347.2	466.4	545.2	575.1
75°	217.2	296.1	413.2	483.5	498.4
77.5°	161.9	244.9	357.8	387.6	377.0
80°	115.0	195.9	279.0	264.1	270.5
82.5°	74.5	149.1	172.5	195.9	202.3
85°	42.6	87.3	106.5	115.0	119.3
87.5°	19.2	31.9	42.6	42.6	40.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)