

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: P309717

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP250-W2A-U-3000K**

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: P309717
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-L82765-HRP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 3000K 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: 3972.0 lumens
Efficiency: N/A
Efficacy: 76.1 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

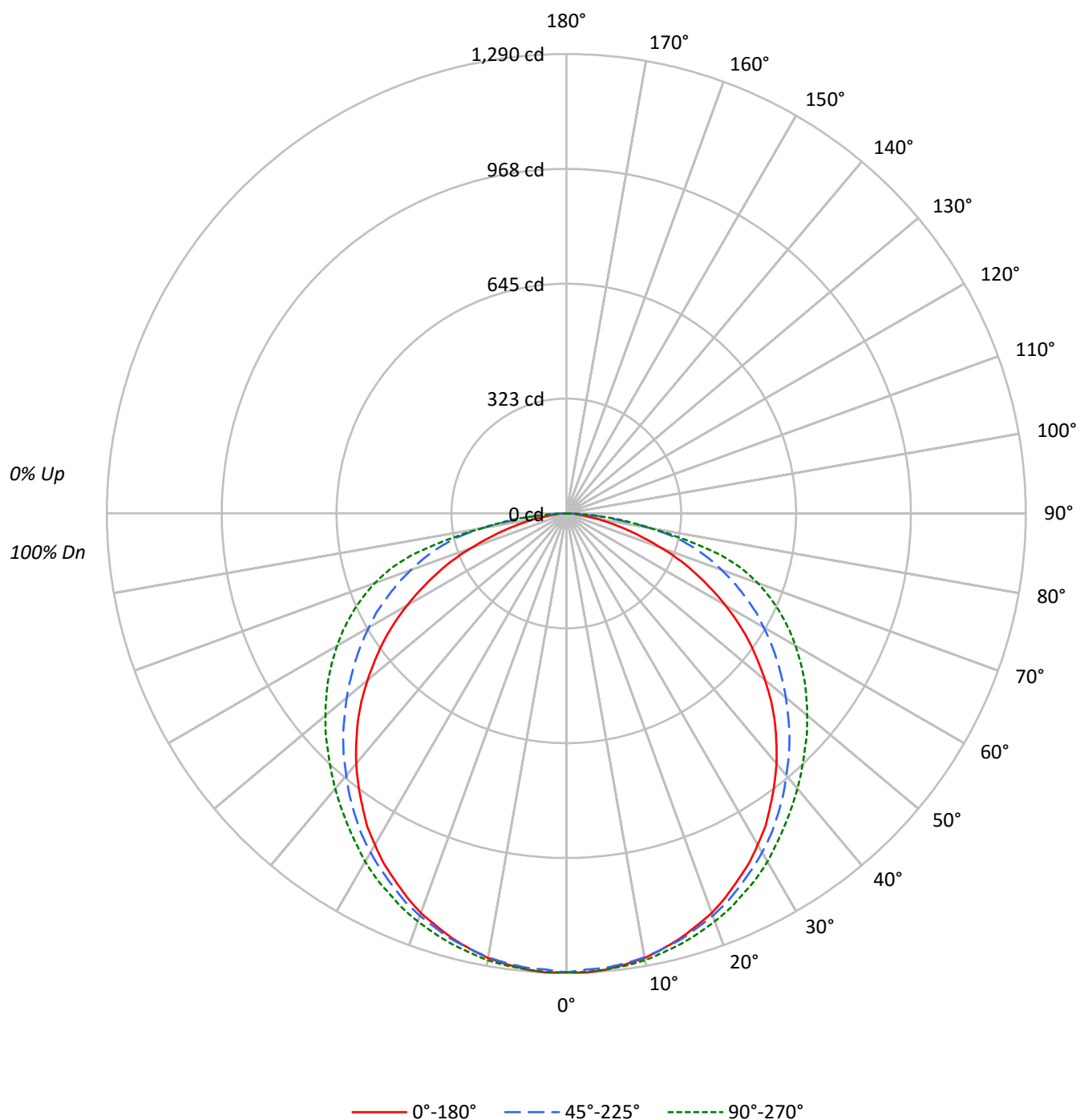
Input Watts (W): 52.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1734	1734	1734
5°	1736	1729	1736
10°	1731	1729	1740
15°	1721	1726	1742
20°	1709	1721	1745
25°	1689	1713	1748
30°	1669	1708	1754
35°	1642	1699	1756
40°	1612	1688	1773
45°	1576	1686	1800
50°	1524	1685	1848
55°	1471	1697	1915
60°	1387	1723	2000
65°	1281	1763	2112
70°	1118	1825	2250
75°	908	1919	2325
80°	670	1881	1881
85°	514	1386	1565



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.1	3.1
10°-20°	350.6	8.8
20°-30°	533.7	13.4
30°-40°	648.0	16.3
40°-50°	684.7	17.2
50°-60°	646.0	16.3
60°-70°	537.2	13.5
70°-80°	353.4	8.9
80°-90°	96.3	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°	1006.4	25.3
0°-40°	1654.4	41.7
0°-60°	2985.1	75.2
0°-90°	3972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1289	1289	1289	1289	1289	
5°	1285	1285	1280	1285	1285	122
15°	1236	1237	1239	1250	1250	348
25°	1137	1144	1154	1174	1177	525
35°	999	1011	1034	1061	1069	626
45°	828	845	886	930	946	638
55°	627	654	723	792	816	558
65°	402	449	554	635	664	398
75°	175	254	369	437	447	188
85°	33	73	90	100	101	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1288.7	1288.7	1288.7	1288.7	1288.7
2.5°	1290.4	1288.7	1282.1	1288.7	1288.7
5°	1285.4	1285.4	1280.4	1285.4	1285.4
7.5°	1277.1	1277.1	1273.8	1280.4	1280.4
10°	1267.1	1267.1	1265.4	1273.8	1273.8
12.5°	1252.1	1253.8	1252.1	1262.1	1262.1
15°	1235.5	1237.2	1238.8	1250.5	1250.5
17.5°	1213.9	1217.2	1220.5	1233.8	1235.5
20°	1193.9	1195.6	1202.2	1217.2	1218.9
22.5°	1167.3	1172.3	1180.6	1195.6	1200.6
25°	1137.4	1144.0	1154.0	1174.0	1177.3
27.5°	1109.1	1114.1	1127.4	1149.0	1155.7
30°	1074.2	1082.5	1099.2	1120.8	1129.1
32.5°	1041.0	1049.3	1069.2	1092.5	1099.2
35°	999.4	1011.0	1034.3	1060.9	1069.2
37.5°	959.5	971.1	999.4	1029.3	1039.3
40°	917.9	931.2	961.1	996.1	1009.4
42.5°	873.0	891.3	924.6	962.8	977.8
45°	828.1	844.7	886.3	929.5	946.2
47.5°	779.9	799.8	844.7	896.3	916.2
50°	728.3	753.3	804.8	861.4	883.0
52.5°	676.8	705.1	763.3	826.4	849.7
55°	626.9	653.5	723.3	791.5	816.5
57.5°	572.0	605.3	681.8	754.9	779.9
60°	515.5	552.1	640.2	716.7	743.3
62.5°	459.0	500.5	600.3	676.8	705.1
65°	402.4	449.0	553.7	635.2	663.5
67.5°	347.5	399.1	510.5	592.0	620.2
70°	284.3	349.2	463.9	543.8	572.0
72.5°	226.1	301.0	419.0	493.9	518.8
75°	174.6	254.4	369.2	437.3	447.3
77.5°	128.0	207.9	317.6	340.9	342.5
80°	86.5	166.3	242.8	239.5	242.8
82.5°	56.5	124.7	153.0	171.3	172.9
85°	33.3	73.2	89.8	99.8	101.4
87.5°	16.6	24.9	31.6	33.3	36.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)