

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P584192

Luminaire Tested: **HC825D010-HM82555930-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584192
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC825D010-HM82555930-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2194.3 lumens
Efficiency: N/A
Efficacy: 81.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.16
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

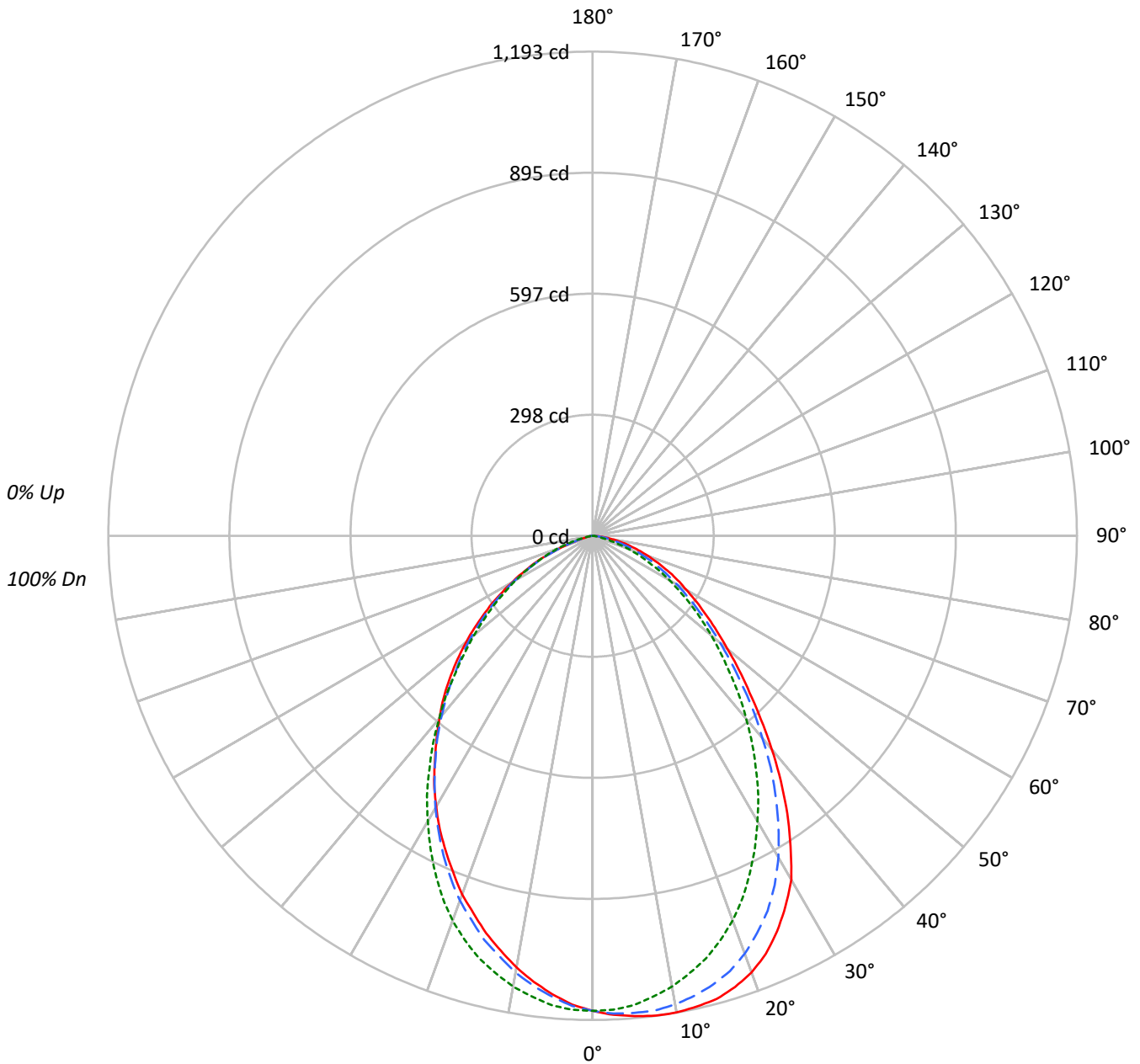
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	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	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	36094	36094	36094
5°	36770	35938	35102
10°	37346	35311	33820
15°	37722	34430	32355
20°	37577	33101	30863
25°	36590	31193	29138
30°	34845	28913	27446
35°	31467	26392	25493
40°	27642	23685	23621
45°	23863	20819	21717
50°	20772	18258	19482
55°	18419	15860	16972
60°	16430	13401	14080
65°	14812	10879	11113
70°	13154	8150	6582
75°	11330	4730	2836
80°	8737	1687	835
85°	5590	566	566



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	5.0
10°-20°	305.9	13.9
20°-30°	432.6	19.7
30°-40°	455.9	20.8
40°-50°	387.4	17.7
50°-60°	279.0	12.7
60°-70°	160.9	7.3
70°-80°	55.1	2.5
80°-90°	7.6	0.3
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°	848.4	38.7
0°-40°	1304.3	59.4
0°-60°	1970.7	89.8
0°-90°	2194.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2194.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1170	1170	1170	1170	1170	
5°	1188	1180	1161	1140	1134	114
15°	1182	1145	1078	1031	1014	333
25°	1075	1020	917	869	856	493
35°	836	787	701	676	677	521
45°	547	522	477	480	498	425
55°	343	316	295	306	316	308
65°	203	174	149	146	152	202
75°	95	71	40	25	24	100
85°	16	10	2	2	2	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5
2.5°	1181.6	1183.2	1181.6	1181.6	1180.0	1178.4	1176.8	1175.3	1172.1	1168.9	1168.9
5°	1187.9	1191.1	1187.9	1187.9	1183.2	1180.0	1176.8	1172.1	1165.8	1161.0	1161.0
7.5°	1192.7	1192.7	1192.7	1187.9	1184.8	1180.0	1172.1	1164.2	1156.2	1148.3	1145.1
10°	1192.7	1192.7	1191.1	1184.8	1181.6	1172.1	1164.2	1153.0	1141.9	1130.9	1127.7
12.5°	1187.9	1189.5	1186.3	1180.0	1172.1	1161.0	1149.9	1135.6	1123.0	1110.2	1103.9
15°	1181.6	1180.0	1176.8	1168.9	1159.3	1145.1	1134.0	1118.2	1100.7	1084.9	1078.5
17.5°	1165.8	1165.8	1161.0	1153.0	1140.4	1124.5	1107.0	1089.6	1070.5	1053.1	1045.2
20°	1145.1	1145.1	1138.8	1129.3	1116.5	1096.0	1077.0	1056.3	1034.0	1016.6	1008.7
22.5°	1114.9	1116.5	1108.6	1097.5	1083.3	1059.5	1040.5	1015.1	992.9	972.2	965.9
25°	1075.4	1078.5	1070.5	1059.5	1040.5	1019.8	996.1	972.2	946.8	926.2	916.8
27.5°	1029.3	1030.9	1023.0	1011.9	992.9	970.7	946.8	921.5	897.7	875.5	866.0
30°	978.6	972.2	969.1	954.8	934.2	915.2	888.2	867.6	842.2	823.2	812.0
32.5°	907.3	910.4	900.8	889.8	873.9	851.7	829.5	805.7	782.0	767.6	759.7
35°	835.9	839.0	834.3	823.2	805.7	786.7	764.5	747.1	726.4	709.0	701.1
37.5°	761.3	761.3	758.1	751.8	739.0	721.6	699.5	682.0	664.6	650.2	645.5
40°	686.7	683.6	682.0	677.2	666.2	650.2	636.0	621.8	604.2	594.8	588.4
42.5°	613.8	613.8	610.6	605.8	594.8	586.8	572.6	556.7	544.0	534.5	534.5
45°	547.2	548.8	544.0	540.9	534.5	521.8	509.1	498.0	487.0	480.5	477.4
47.5°	488.5	488.5	483.7	480.5	474.2	463.1	452.0	442.6	434.5	429.8	428.2
50°	433.0	433.0	433.0	425.0	417.1	409.2	401.2	390.1	385.4	382.2	380.6
52.5°	385.4	383.8	383.8	377.5	369.6	360.1	352.1	342.6	337.8	334.7	336.2
55°	342.6	342.6	341.0	333.1	325.2	315.7	307.7	299.8	296.6	293.4	295.0
56°	325.2	325.2	323.6	317.3	307.7	299.8	290.3	282.3	277.6	279.2	279.2
57°	312.4	309.2	309.2	301.3	293.4	282.3	274.3	266.4	263.3	261.7	261.7
58°	296.6	295.0	293.4	285.5	277.6	268.0	260.1	252.2	247.4	247.4	245.9
59°	280.8	280.8	277.6	271.2	263.3	253.8	245.9	237.9	233.2	231.5	231.5
60°	266.4	268.0	263.3	256.9	250.6	239.5	229.9	223.6	218.9	217.3	217.3
61°	253.8	253.8	250.6	242.7	234.8	226.8	217.3	209.4	206.2	203.0	203.0
62°	242.7	239.5	237.9	229.9	222.0	212.5	204.6	196.7	192.0	188.7	190.4
63°	228.3	226.8	223.6	217.3	209.4	199.9	190.4	183.9	179.2	174.5	176.0
64°	217.3	215.7	210.9	204.6	196.7	187.1	177.6	171.3	168.1	163.4	161.8
65°	203.0	201.4	199.9	192.0	183.9	174.5	166.5	160.2	155.5	152.3	149.1
66°	190.4	192.0	188.7	182.4	172.9	165.0	153.9	147.6	144.3	139.5	136.4
67°	179.2	179.2	176.0	169.7	160.2	152.3	144.3	136.4	131.6	126.9	125.3
67.5°	172.9	172.9	169.7	161.8	155.5	145.9	138.0	131.6	125.3	122.1	119.0
68°	166.5	166.5	165.0	158.6	150.7	141.1	133.2	125.3	119.0	114.2	112.6
69°	155.5	157.0	153.9	147.6	139.5	130.0	122.1	115.8	109.5	104.6	101.5
70°	145.9	144.3	141.1	134.8	126.9	120.6	112.6	104.6	98.3	92.0	90.4
71°	133.2	133.2	130.0	125.3	117.4	109.5	101.5	95.1	88.8	80.9	79.3
72°	123.7	123.7	120.6	114.2	107.9	99.9	92.0	84.1	79.3	71.4	68.2
72.5°	117.4	119.0	115.8	109.5	103.0	93.6	87.2	80.9	73.0	66.7	63.5
73°	114.2	112.6	111.1	104.6	96.7	90.4	82.5	76.1	68.2	61.8	58.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	71.4	71.4	69.8	63.5	57.1	50.7	44.4	38.1	31.7	25.4	22.3
80°	49.2	50.7	47.6	44.4	39.7	33.3	27.0	22.3	15.8	12.7	9.5
82.5°	31.7	31.7	30.2	27.0	23.8	19.0	15.8	11.1	7.9	6.3	4.7
85°	15.8	17.4	15.8	14.2	11.1	9.5	7.9	4.7	3.2	1.6	1.6
87.5°	6.3	6.3	6.3	4.7	4.7	3.2	1.6	1.6	1.6	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5
2.5°	1165.8	1165.8	1162.6	1161.0	1159.3	1157.8	1156.2	1154.6	1154.6	1156.2
5°	1156.2	1153.0	1146.7	1145.1	1140.4	1138.8	1135.6	1134.0	1135.6	1134.0
7.5°	1141.9	1135.6	1127.7	1124.5	1118.2	1114.9	1110.2	1110.2	1107.0	1108.6
10°	1123.0	1113.4	1103.9	1097.5	1092.8	1088.0	1084.9	1081.7	1080.1	1080.1
12.5°	1099.1	1088.0	1078.5	1069.0	1061.0	1057.9	1051.5	1051.5	1048.4	1046.8
15°	1072.1	1057.9	1046.8	1037.3	1030.9	1024.6	1019.8	1016.6	1013.5	1013.5
17.5°	1037.3	1024.6	1013.5	1002.4	992.9	988.1	983.3	978.6	978.6	975.4
20°	999.2	984.9	975.4	964.3	956.4	948.4	942.1	942.1	938.9	940.5
22.5°	956.4	938.9	929.4	921.5	913.6	907.3	900.8	900.8	899.3	897.7
25°	908.8	894.5	883.4	873.9	869.2	862.8	861.2	858.0	856.4	856.4
27.5°	858.0	846.9	832.7	827.9	821.5	818.4	818.4	816.8	813.6	815.2
30°	804.1	791.5	783.5	780.4	774.0	774.0	772.4	769.2	769.2	770.8
32.5°	751.8	739.0	732.7	731.1	724.8	724.8	723.2	724.8	724.8	726.4
35°	694.6	683.6	682.0	677.2	675.6	675.6	675.6	678.8	682.0	677.2
37.5°	640.7	632.8	628.1	626.5	628.1	628.1	629.7	634.4	632.8	631.2
40°	585.3	578.9	575.8	575.8	578.9	582.1	582.1	586.8	588.4	586.8
42.5°	529.8	524.9	524.9	526.5	529.8	531.4	536.1	540.9	542.4	544.0
45°	477.4	477.4	477.4	478.9	480.5	483.7	490.1	494.9	496.5	498.0
47.5°	426.6	425.0	429.8	431.4	436.1	437.7	442.6	448.9	450.5	452.0
50°	379.1	382.2	383.8	388.6	391.7	391.7	398.1	401.2	406.1	406.1
52.5°	334.7	339.4	341.0	345.7	347.3	348.9	352.1	356.8	360.1	360.1
55°	295.0	296.6	299.8	301.3	306.1	307.7	310.8	312.4	317.3	315.7
56°	277.6	280.8	282.3	285.5	288.7	290.3	293.4	295.0	298.2	299.8
57°	261.7	263.3	268.0	269.6	272.8	272.8	274.3	279.2	279.2	280.8
58°	245.9	249.0	250.6	252.2	255.3	256.9	260.1	261.7	263.3	261.7
59°	231.5	233.2	234.8	234.8	237.9	237.9	242.7	245.9	247.4	247.4
60°	217.3	217.3	218.9	220.4	223.6	225.2	225.2	228.3	228.3	228.3
61°	203.0	203.0	204.6	206.2	207.8	207.8	210.9	210.9	212.5	214.1
62°	190.4	188.7	188.7	190.4	190.4	193.5	195.1	196.7	198.3	196.7
63°	176.0	174.5	174.5	174.5	174.5	177.6	177.6	179.2	182.4	180.8
64°	160.2	160.2	160.2	160.2	161.8	161.8	165.0	166.5	168.1	169.7
65°	149.1	145.9	144.3	144.3	145.9	147.6	149.1	150.7	152.3	152.3
66°	136.4	133.2	131.6	131.6	131.6	131.6	134.8	134.8	138.0	138.0
67°	122.1	119.0	117.4	115.8	115.8	115.8	120.6	119.0	119.0	119.0
67.5°	117.4	112.6	111.1	109.5	107.9	111.1	109.5	111.1	111.1	109.5
68°	111.1	107.9	104.6	101.5	101.5	101.5	103.0	104.6	103.0	101.5
69°	98.3	96.7	92.0	88.8	87.2	88.8	87.2	88.8	87.2	88.8
70°	87.2	82.5	77.7	76.1	74.6	74.6	74.6	73.0	74.6	73.0
71°	76.1	71.4	66.7	63.5	61.8	61.8	60.2	61.8	60.2	61.8
72°	65.1	60.2	53.9	50.7	50.7	50.7	50.7	49.2	50.7	49.2
72.5°	60.2	53.9	49.2	46.0	44.4	44.4	44.4	44.4	42.8	44.4
73°	55.5	49.2	42.8	41.2	41.2	41.2	39.7	38.1	39.7	39.7



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	19.0	14.2	12.7	12.7	12.7	12.7	12.7	12.7	11.1	11.1
80°	7.9	6.3	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
85°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180° - - 45°-225° - - - - 90°-270°







74°	103.0	103.0	99.9	95.1	87.2	79.3	73.0	66.7	58.6	50.7	47.6
75°	95.1	93.6	90.4	85.6	79.3	71.4	65.1	57.1	50.7	42.8	39.7





74°	46.0	38.1	34.9	31.7	31.7	31.7	30.2	30.2	30.2	31.7
75°	36.5	30.2	27.0	23.8	25.4	23.8	25.4	23.8	23.8	23.8



(END OF REPORT)