

Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P584079

Luminaire Tested: **HCC8W20D010MB-HM80520935-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584079
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC8W20D010MB-HM80520935-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

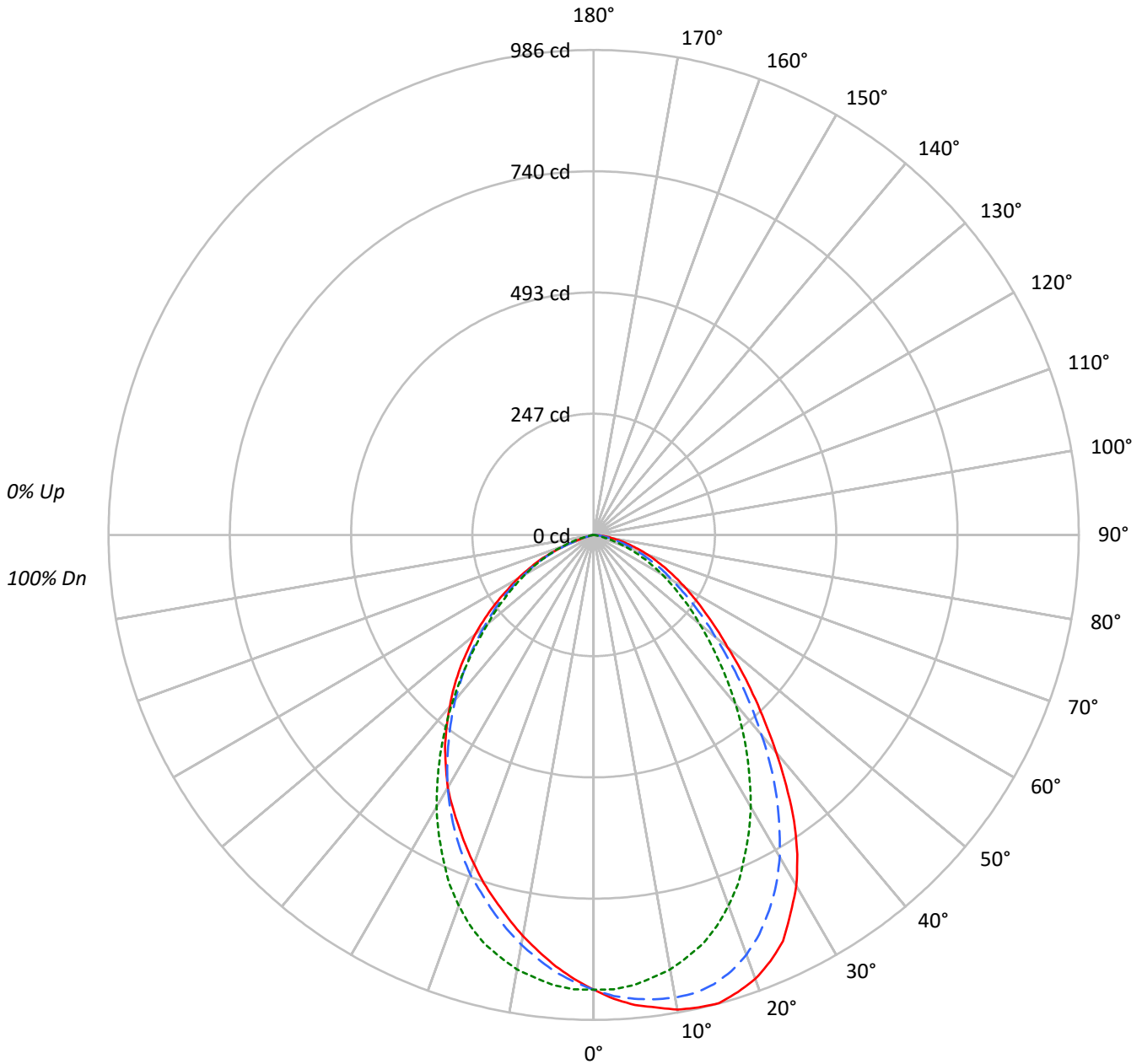
Lumens per Lamp: N/A
Luminaire Lumens: 1722.5 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 20
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



TEST NUMBER: P584079
CATALOG NUMBER: HCC8W20D010MB-HM80520935-81WWBB

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab
 1121 Highway 74 South
 Peachtree City, GA 30269



TEST NUMBER: P584079

CATALOG NUMBER: HCC8W20D010MB-HM80520935-81WWBB

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	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					100			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88					88			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77					77			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67					67			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59					59			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53					53			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47					47			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43					43			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39					39			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35					35			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32					32			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	28514	28514	28514
5°	29694	28453	27255
10°	30686	28090	25926
15°	31464	27448	24582
20°	31526	26311	23361
25°	30996	24644	22150
30°	29336	22738	21115
35°	26746	20448	19827
40°	23259	18030	18303
45°	19956	15612	16759
50°	17040	13461	15054
55°	14940	11591	13080
60°	13297	9892	11002
65°	11798	8070	8770
70°	10468	5978	4986
75°	8733	3122	1477
80°	6872	994	249
85°	4883	495	0



TEST NUMBER: P584079

CATALOG NUMBER: HCC8W20D010MB-HM80520935-81WWBB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.1	5.1
10°-20°	244.2	14.2
20°-30°	345.7	20.1
30°-40°	361.6	21.0
40°-50°	301.6	17.5
50°-60°	213.9	12.4
60°-70°	123.2	7.2
70°-80°	39.6	2.3
80°-90°	5.5	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°	677.0	39.3
0°-40°	1038.7	60.3
0°-60°	1554.2	90.2
0°-90°	1722.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1722.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	925	925	925	925	925	
5°	959	947	919	892	880	92
15°	986	946	860	792	770	277
25°	911	843	724	666	651	416
35°	710	648	543	514	527	440
45°	458	420	358	362	384	355
55°	278	249	216	227	243	251
65°	162	136	111	111	120	162
75°	73	54	26	12	12	79
85°	14	7	1	0	0	17
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab
 1121 Highway 74 South
 Peachtree City, GA 30269



TEST NUMBER: P584079

CATALOG NUMBER: HCC8W20D010MB-HM80520935-81WWBB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7
2.5°	944.1	942.6	941.3	942.6	941.3	942.6	941.3	941.3	939.9	938.5	938.5
5°	959.3	957.9	957.9	957.9	956.5	955.2	955.2	953.8	951.0	949.6	946.9
7.5°	969.0	970.3	970.3	970.3	967.6	967.6	964.9	962.0	959.3	956.5	952.3
10°	980.0	980.0	978.7	977.3	974.4	973.1	971.7	969.0	964.9	959.3	955.2
12.5°	984.1	984.1	982.8	980.0	978.7	977.3	975.9	971.7	966.2	959.3	953.8
15°	985.6	982.8	981.4	980.0	977.3	973.1	973.1	967.6	960.7	952.3	945.5
17.5°	974.4	975.9	973.1	970.3	966.2	963.4	959.3	955.2	946.9	937.2	930.2
20°	960.7	959.3	957.9	953.8	948.2	946.9	942.6	935.8	928.9	917.8	908.1
22.5°	938.5	937.2	934.4	931.7	926.1	923.4	919.2	911.0	901.3	890.2	879.2
25°	911.0	908.1	904.0	898.4	894.3	891.6	886.0	877.8	866.6	854.2	843.2
27.5°	866.6	870.8	868.1	859.8	855.6	850.1	848.7	837.7	828.0	815.6	803.1
30°	823.9	823.9	819.7	815.6	808.6	804.5	798.9	790.6	780.9	765.8	756.1
32.5°	770.0	768.5	763.0	761.7	756.1	747.9	746.4	735.3	725.6	714.6	702.2
35°	710.5	707.7	702.2	698.1	695.3	691.1	687.0	677.3	667.6	656.6	648.3
37.5°	642.8	642.8	641.4	634.5	631.7	628.9	624.8	615.1	609.6	598.6	590.2
40°	577.8	576.5	572.2	570.9	568.1	563.9	561.2	555.7	547.4	539.1	530.8
42.5°	514.2	515.6	510.0	511.5	505.9	503.2	501.8	493.5	489.3	481.1	474.1
45°	457.6	456.1	453.4	452.0	449.3	446.4	443.7	439.6	432.6	424.3	420.2
47.5°	405.0	400.8	400.8	399.5	398.1	392.5	391.1	387.0	382.8	374.6	369.0
50°	355.2	355.2	355.2	353.9	349.8	348.3	345.6	341.4	337.2	331.8	323.4
52.5°	315.1	315.1	315.1	313.8	308.3	306.8	305.4	300.0	294.4	290.3	284.7
55°	277.9	279.2	277.9	275.1	270.9	270.9	266.8	264.1	258.5	254.4	248.8
57.5°	246.1	246.1	243.3	241.8	239.1	237.7	235.0	232.3	225.3	221.2	214.3
60°	215.6	214.3	214.3	211.5	208.7	205.9	204.6	200.5	197.6	190.8	185.2
62.5°	187.9	187.9	185.2	185.2	179.7	179.7	178.4	174.1	170.0	163.1	160.4
65°	161.7	161.7	160.4	159.0	154.8	153.4	152.0	147.9	143.7	139.6	135.5
67.5°	138.2	138.2	135.5	134.0	131.3	129.9	127.2	124.3	120.2	116.1	111.9
70°	116.1	114.8	113.4	111.9	109.2	107.8	105.1	102.2	98.1	95.4	91.3
72.5°	94.0	94.0	92.7	89.8	88.4	87.1	85.7	83.0	78.8	74.6	71.9
75°	73.3	73.3	73.3	70.4	67.7	66.3	66.3	63.6	60.9	56.6	53.9
77.5°	56.6	55.3	53.9	53.9	51.2	49.8	48.3	47.0	42.9	41.5	38.7
80°	38.7	40.1	38.7	37.4	35.9	34.5	34.5	31.8	30.4	27.7	24.8
82.5°	26.2	24.8	24.8	23.5	23.5	22.1	22.1	19.4	18.0	16.5	15.2
85°	13.8	13.8	12.4	12.4	12.4	11.1	11.1	9.7	9.7	8.3	6.9
87.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	2.7	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab
 1121 Highway 74 South
 Peachtree City, GA 30269



TEST NUMBER: P584079

CATALOG NUMBER: HCC8W20D010MB-HM80520935-81WWBB

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7
2.5°	937.2	934.4	933.1	933.1	931.7	930.2	928.9	927.5	924.7	924.7	922.0
5°	944.1	941.3	939.9	935.8	933.1	933.1	927.5	926.1	922.0	919.2	916.4
7.5°	949.6	944.1	939.9	935.8	933.1	930.2	924.7	919.2	913.7	908.1	905.4
10°	949.6	944.1	937.2	930.2	927.5	924.7	917.8	909.5	902.6	897.1	890.2
12.5°	946.9	938.5	930.2	924.7	919.2	915.1	906.7	898.4	890.2	879.2	873.6
15°	938.5	927.5	919.2	909.5	905.4	898.4	891.6	879.2	869.5	859.8	852.8
17.5°	922.0	908.1	898.4	888.7	881.9	877.8	866.6	855.6	844.5	833.5	825.2
20°	897.1	884.6	873.6	861.2	855.6	850.1	836.3	825.2	814.2	801.8	793.5
22.5°	866.6	854.2	839.0	829.4	821.0	814.2	801.8	789.2	778.2	767.1	756.1
25°	829.4	816.9	803.1	787.9	782.4	775.4	761.7	749.2	736.7	724.3	714.6
27.5°	789.2	772.7	761.7	745.0	739.5	732.6	717.4	703.5	692.5	682.8	671.7
30°	740.9	728.5	713.2	698.1	692.5	685.6	673.1	660.7	649.6	638.6	627.5
32.5°	688.4	676.0	660.7	649.6	641.4	635.8	623.4	612.4	601.3	590.2	580.6
35°	633.1	619.2	608.1	597.1	590.2	583.3	570.9	561.2	552.9	543.2	533.6
37.5°	576.5	566.8	555.7	543.2	536.3	530.8	521.1	510.0	503.2	494.9	487.9
40°	521.1	510.0	500.3	489.3	483.8	479.7	470.0	461.7	454.7	447.9	443.7
42.5°	464.4	454.7	445.1	438.2	434.0	429.9	422.9	413.3	409.2	402.2	398.1
45°	411.9	403.7	396.7	387.0	384.3	381.5	373.2	366.3	362.2	358.0	355.2
47.5°	362.2	356.6	348.3	342.8	338.6	335.9	330.4	324.8	320.7	318.0	315.1
50°	319.3	312.4	306.8	301.3	298.6	294.4	288.9	286.2	283.3	280.6	280.6
52.5°	279.2	272.3	266.8	262.6	259.9	257.1	252.9	251.5	248.8	248.8	247.4
55°	241.8	237.7	232.3	226.7	225.3	223.9	221.2	218.4	217.0	215.6	217.0
57.5°	210.2	205.9	200.5	196.3	194.9	193.5	192.2	189.4	187.9	187.9	187.9
60°	181.1	176.9	172.8	168.7	168.7	165.8	164.5	163.1	161.7	160.4	160.4
62.5°	154.8	150.7	146.6	143.7	142.4	141.0	138.2	136.9	135.5	135.5	134.0
65°	131.3	125.8	124.3	120.2	118.9	117.5	116.1	113.4	111.9	110.6	109.2
67.5°	107.8	105.1	100.9	98.1	96.8	95.4	94.0	91.3	89.8	88.4	85.7
70°	87.1	84.3	81.6	78.8	77.4	76.0	73.3	70.4	69.1	66.3	62.2
72.5°	67.7	65.0	62.2	59.5	58.0	56.6	53.9	51.2	48.3	45.6	42.9
75°	51.2	48.3	44.2	41.5	40.1	40.1	35.9	33.2	30.4	26.2	23.5
77.5°	35.9	31.8	30.4	27.7	26.2	23.5	20.7	18.0	15.2	13.8	11.1
80°	23.5	20.7	18.0	16.5	15.2	13.8	12.4	9.7	6.9	5.6	4.1
82.5°	13.8	12.4	11.1	9.7	8.3	6.9	5.6	5.6	4.1	2.7	1.4
85°	6.9	5.6	4.1	4.1	2.7	2.7	2.7	1.4	1.4	1.4	1.4
87.5°	2.7	1.4	1.4	1.4	1.4	1.4	1.4	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	0.0

Cooper Lighting Solutions Photometric Lab
 1121 Highway 74 South
 Peachtree City, GA 30269



TEST NUMBER: P584079

CATALOG NUMBER: HCC8W20D010MB-HM80520935-81WWBB

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7
2.5°	920.5	919.2	917.8	916.4	916.4	913.7	913.7	912.3	909.5	908.1	908.1
5°	912.3	908.1	905.4	904.0	902.6	898.4	897.1	894.3	891.6	888.7	887.4
7.5°	899.9	893.0	890.2	888.7	884.6	880.5	877.8	873.6	869.5	865.3	863.9
10°	884.6	877.8	870.8	868.1	863.9	861.2	855.6	850.1	846.0	841.8	837.7
12.5°	865.3	857.0	850.1	847.4	843.2	837.7	829.4	826.6	819.7	816.9	811.4
15°	843.2	833.5	826.6	822.4	818.3	810.0	804.5	798.9	792.1	789.2	783.8
17.5°	815.6	804.5	797.6	793.5	790.6	783.8	775.4	768.5	761.7	758.8	754.7
20°	782.4	775.4	765.8	761.7	758.8	750.6	742.3	739.5	734.0	728.5	724.3
22.5°	745.0	738.2	728.5	724.3	722.9	716.1	709.1	704.9	700.8	696.7	692.5
25°	706.4	698.1	689.7	687.0	684.3	678.7	673.1	670.4	666.3	663.5	660.7
27.5°	664.9	656.6	649.6	645.5	642.8	638.6	635.8	633.1	630.4	627.5	626.2
30°	620.7	612.4	606.8	604.0	601.3	599.9	595.7	594.4	593.0	590.2	591.6
32.5°	576.5	569.5	563.9	559.8	559.8	557.1	555.7	555.7	554.2	554.2	554.2
35°	528.0	523.9	519.7	518.3	517.0	515.6	514.2	515.6	514.2	515.6	517.0
37.5°	483.8	479.7	476.9	475.5	474.1	475.5	474.1	474.1	475.5	478.2	479.7
40°	438.2	435.4	432.6	434.0	432.6	432.6	432.6	436.7	438.2	439.6	440.9
42.5°	395.4	392.5	391.1	391.1	392.5	391.1	394.0	395.4	398.1	402.2	405.0
45°	353.9	352.5	352.5	353.9	352.5	355.2	355.2	358.0	362.2	364.9	367.7
47.5°	315.1	315.1	315.1	316.5	316.5	318.0	320.7	322.1	324.8	327.7	330.4
50°	279.2	280.6	282.0	282.0	282.0	284.7	287.5	288.9	290.3	291.6	295.9
52.5°	247.4	248.8	248.8	250.2	251.5	252.9	254.4	257.1	258.5	261.2	262.6
55°	217.0	217.0	219.7	221.2	221.2	221.2	223.9	223.9	226.7	228.1	230.8
57.5°	187.9	189.4	189.4	190.8	190.8	192.2	193.5	194.9	196.3	197.6	199.0
60°	160.4	160.4	160.4	161.7	163.1	164.5	163.1	165.8	165.8	168.7	170.0
62.5°	134.0	135.5	135.5	135.5	135.5	135.5	135.5	136.9	138.2	139.6	141.0
65°	109.2	109.2	109.2	107.8	109.2	107.8	109.2	110.6	110.6	111.9	113.4
67.5°	84.3	84.3	81.6	81.6	83.0	83.0	83.0	83.0	81.6	84.3	84.3
70°	60.9	59.5	58.0	56.6	56.6	55.3	55.3	53.9	53.9	53.9	53.9
72.5°	40.1	37.4	34.5	33.2	31.8	31.8	29.1	27.7	29.1	29.1	29.1
75°	20.7	18.0	16.5	15.2	13.8	13.8	12.4	12.4	12.4	12.4	12.4
77.5°	8.3	6.9	5.6	5.6	4.1	4.1	4.1	4.1	4.1	4.1	4.1
80°	2.7	2.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
85°	1.4	0.0	0.0	1.4	0.0	1.4	1.4	1.4	0.0	0.0	0.0
87.5°	0.0	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	0.0

Cooper Lighting Solutions Photometric Lab
 1121 Highway 74 South
 Peachtree City, GA 30269



TEST NUMBER: P584079

CATALOG NUMBER: HCC8W20D010MB-HM80520935-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	924.7	924.7	924.7	924.7	924.7	924.7	924.7	924.7
2.5°	906.7	906.7	905.4	906.7	904.0	905.4	904.0	904.0
5°	886.0	883.3	883.3	883.3	881.9	881.9	880.5	880.5
7.5°	861.2	859.8	858.4	857.0	855.6	854.2	854.2	854.2
10°	836.3	833.5	833.5	832.1	829.4	828.0	828.0	828.0
12.5°	807.2	805.9	804.5	804.5	798.9	800.3	798.9	798.9
15°	779.6	778.2	778.2	774.1	771.3	771.3	771.3	770.0
17.5°	750.6	749.2	747.9	745.0	742.3	742.3	740.9	742.3
20°	720.2	718.8	716.1	716.1	714.6	713.2	710.5	711.9
22.5°	689.7	687.0	685.6	685.6	684.3	684.3	681.4	681.4
25°	657.9	656.6	655.2	656.6	653.8	653.8	651.0	651.0
27.5°	624.8	623.4	623.4	623.4	622.0	623.4	622.0	622.0
30°	591.6	591.6	590.2	590.2	591.6	590.2	591.6	593.0
32.5°	555.7	555.7	557.1	557.1	558.4	558.4	558.4	558.4
35°	518.3	521.1	521.1	522.4	523.9	525.3	525.3	526.7
37.5°	483.8	485.2	486.5	487.9	490.6	490.6	490.6	490.6
40°	446.4	447.9	450.6	449.3	454.7	456.1	454.7	454.7
42.5°	407.8	410.5	411.9	414.6	416.1	418.8	420.2	420.2
45°	371.9	373.2	376.0	378.7	380.1	384.3	384.3	384.3
47.5°	334.5	337.2	338.6	341.4	342.8	346.9	348.3	346.9
50°	298.6	301.3	304.1	304.1	308.3	309.7	312.4	313.8
52.5°	264.1	265.4	268.2	269.5	272.3	275.1	276.5	277.9
55°	230.8	232.3	235.0	235.0	239.1	240.5	243.3	243.3
57.5°	200.5	201.8	204.6	203.2	205.9	208.7	208.7	207.3
60°	171.4	171.4	171.4	174.1	175.5	176.9	178.4	178.4
62.5°	141.0	143.7	145.1	145.1	146.6	147.9	147.9	146.6
65°	113.4	116.1	117.5	117.5	118.9	118.9	118.9	120.2
67.5°	85.7	85.7	85.7	87.1	85.7	85.7	85.7	85.7
70°	53.9	53.9	53.9	53.9	52.5	53.9	53.9	55.3
72.5°	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
75°	12.4	12.4	12.4	13.8	12.4	12.4	12.4	12.4
77.5°	5.6	4.1	5.6	5.6	4.1	4.1	4.1	4.1
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
85°	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	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

Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



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

Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)