

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: NEO-RAY

Report Number: P199438

Luminaire Tested: **S123-DIW-U1-1-30-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199438
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27889 P27889)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123-DIW-U1-1-30-0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL1-3000K, NO LENS
DOWNLIGHT LL1-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

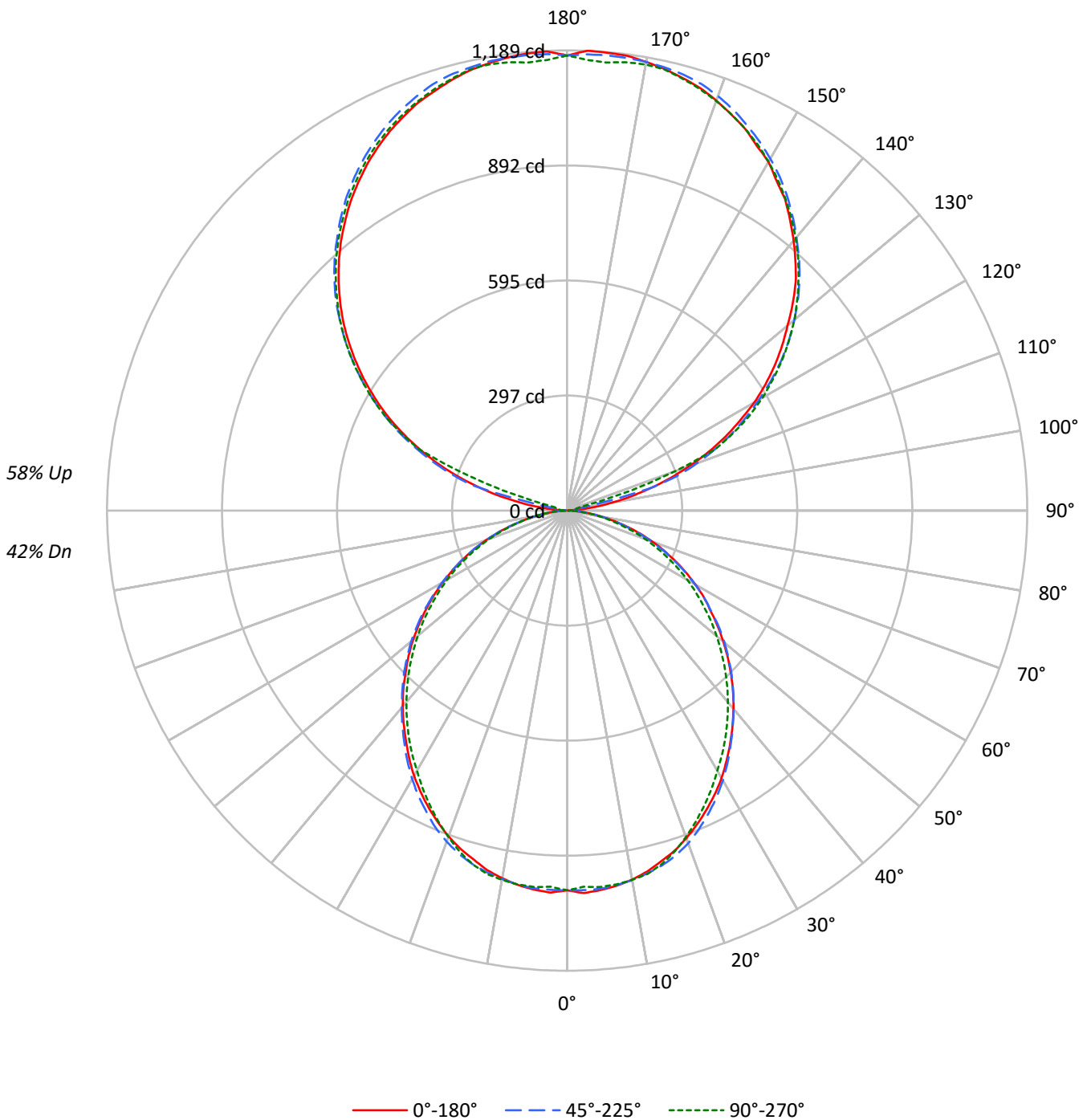
Lumens per Lamp: N/A
Luminaire Lumens: 6060.7 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

Input Watts (W): 52
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: P199438

CATALOG NUMBER: S123-DIW-U1-1-30-0048-1D-UDD-1-NA-W

Luminous Intensity Polar Plot





TEST NUMBER: P199438

CATALOG NUMBER: S123-DIW-U1-1-30-0048-1D-UDD-1-NA-W

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	50	30	10	0													
RCR																																					
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42																			
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	42	36																			
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30																			
3	80	70	63	57	73	65	58	53	54	49	45	43	40	37	34	32	30	25																			
4	73	62	55	49	66	57	50	45	48	42	38	39	35	32	30	28	26	22																			
5	67	55	47	42	61	51	44	39	42	37	33	35	31	28	27	24	22	19																			
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17																			
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	23	20	17	15																			
8	53	41	33	28	48	37	31	26	32	26	22	26	22	19	21	18	16	13																			
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12																			
10	46	34	27	22	42	31	25	21	27	22	18	22	18	15	18	15	13	11																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10345	10345	10345
5°	10337	9135	10323
10°	10200	8203	10164
15°	9996	7364	9944
20°	9780	6513	9729
25°	9510	5747	9450
30°	9226	5064	9147
35°	8885	4479	8778
40°	8545	3937	8449
45°	8182	3436	8062
50°	7792	2965	7681
55°	7359	2517	7237
60°	6961	2103	6752
65°	6428	1688	6174
70°	5765	1287	5465
75°	4833	887	4481
80°	3617	531	3234
85°	2048	227	1806



TEST NUMBER: P199438

CATALOG NUMBER: S123-DIW-U1-1-30-0048-1D-UDD-1-NA-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.0	1.5
10°-20°	265.5	4.4
20°-30°	392.4	6.5
30°-40°	456.8	7.5
40°-50°	458.4	7.6
50°-60°	401.2	6.6
60°-70°	296.3	4.9
70°-80°	161.9	2.7
80°-90°	41.8	0.7
90°-100°	27.4	0.5
100°-110°	193.6	3.2
110°-120°	463.3	7.6
120°-130°	599.7	9.9
130°-140°	650.9	10.7
140°-150°	616.2	10.2
150°-160°	503.3	8.3
160°-170°	327.0	5.4
170°-180°	112.2	1.9
0°-30°	751.0	12.4
0°-40°	1207.8	19.9
0°-60°	2067.3	34.1
0°-90°	2567.3	42.4
90°-120°	684.3	11.3
90°-150°	2551.0	42.1
90°-180°	3493.0	57.6
0°-180°	6060.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	981	981	981	981	981	
5°	984	981	976	980	983	93
15°	938	949	946	946	933	265
25°	852	864	840	859	847	393
35°	735	737	714	733	726	460
45°	599	601	576	596	590	462
55°	453	455	430	451	445	407
65°	308	305	285	298	296	305
75°	159	156	144	147	148	169
85°	35	37	34	33	31	40
90°	2	4	3	3	1	4
95°	35	15	17	16	42	46
105°	223	218	33	256	241	236
115°	451	468	474	480	466	444
125°	655	675	678	677	664	585
135°	835	850	846	851	835	642
145°	982	991	984	992	976	613
155°	1089	1099	1089	1100	1082	501
165°	1157	1166	1155	1166	1152	327
175°	1187	1181	1162	1181	1185	113
180°	1176	1176	1176	1176	1176	



TEST NUMBER: P199438

CATALOG NUMBER: S123-DIW-U1-1-30-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	981.1	981.1	981.1	981.1	981.1	981.1	981.1	981.1	981.1
2.5°	989.2	979.0	981.8	980.4	972.9	980.4	981.1	978.4	987.9
5°	984.5	975.6	981.1	979.0	976.3	979.0	979.7	974.3	983.1
7.5°	977.7	970.2	976.3	975.6	974.3	975.6	975.0	967.5	975.6
10°	968.1	961.3	969.5	970.9	968.8	970.2	966.8	959.3	964.7
12.5°	955.2	949.8	960.0	962.7	961.3	962.0	957.2	946.4	951.8
15°	938.2	935.5	949.1	951.1	945.7	949.1	945.7	932.1	933.4
17.5°	921.8	919.1	934.1	931.4	923.9	929.3	930.0	915.0	916.4
20°	900.7	899.4	915.0	906.9	897.3	904.1	910.3	895.3	896.0
22.5°	877.6	879.0	890.5	879.0	869.4	876.2	887.8	873.5	872.1
25°	852.4	856.5	864.0	850.4	839.5	847.0	859.2	851.0	847.0
27.5°	826.5	832.7	835.4	819.7	808.8	816.3	832.0	826.5	819.7
30°	797.9	805.4	804.7	788.4	776.1	784.3	800.7	800.0	791.1
32.5°	766.6	776.8	771.4	755.7	745.5	751.6	768.0	770.0	759.8
35°	734.6	745.5	737.3	722.4	713.5	719.6	733.3	739.4	725.8
37.5°	701.9	712.8	703.3	689.0	680.2	686.3	699.2	706.7	693.8
40°	668.6	678.8	669.3	657.0	646.1	652.9	664.5	672.7	661.1
42.5°	634.5	645.4	635.2	623.0	611.4	620.2	630.4	638.6	626.4
45°	599.1	610.7	601.2	586.9	576.0	584.8	596.4	603.2	590.3
47.5°	563.0	576.7	565.8	550.8	539.9	548.8	561.0	567.8	555.6
50°	527.0	538.5	530.4	514.7	503.8	512.0	525.6	531.0	519.5
52.5°	490.2	503.8	494.3	478.6	468.4	475.2	488.2	494.3	482.0
55°	452.8	463.6	454.8	441.9	430.3	438.5	450.7	454.8	445.3
57.5°	420.1	428.2	420.1	405.8	394.9	401.0	412.6	418.0	408.5
60°	382.6	390.1	381.9	368.3	358.8	364.2	373.8	380.6	371.1
62.5°	345.2	352.7	343.1	330.9	322.0	328.2	336.3	342.5	333.6
65°	308.4	315.2	305.0	294.1	285.3	291.4	297.5	304.3	296.2
67.5°	271.0	277.1	267.6	256.7	249.2	254.0	259.4	266.2	259.4
70°	234.2	239.0	230.8	220.6	213.8	217.9	222.6	228.1	222.0
72.5°	197.4	203.6	193.4	185.2	179.1	180.4	185.9	190.0	185.2
75°	159.3	163.4	155.9	149.1	143.7	145.0	147.1	153.2	147.7
77.5°	123.9	128.7	122.5	116.4	112.3	113.7	114.4	118.5	113.0
80°	90.6	94.6	90.6	85.8	83.1	83.7	83.7	86.5	81.0
82.5°	60.6	64.7	62.0	58.6	57.9	56.5	56.5	58.6	53.1
85°	34.7	39.5	37.4	34.7	34.0	33.4	33.4	34.7	30.6
87.5°	15.7	19.1	17.0	15.0	13.6	12.9	12.9	15.0	11.6
90°	2.0	4.8	4.1	2.7	2.7	2.7	3.4	4.1	1.4
92.5°	7.5	8.9	8.9	8.9	8.9	10.2	10.9	10.9	12.9
95°	34.7	12.9	15.0	16.3	17.0	17.0	16.3	14.3	42.2
97.5°	72.2	57.2	18.4	20.4	21.8	21.1	19.7	72.8	81.7
100°	117.1	132.8	20.4	23.1	24.5	23.8	22.5	149.1	129.4
102.5°	166.8	185.2	73.5	25.9	26.6	25.9	112.3	200.8	184.5
105°	222.6	238.3	218.5	43.6	33.4	53.1	256.0	254.0	241.0
107.5°	279.1	294.8	298.2	193.4	175.0	202.9	313.2	309.1	299.6
110°	337.0	348.6	356.1	359.5	293.4	364.2	369.0	363.6	355.4



TEST NUMBER: P199438

CATALOG NUMBER: S123-DIW-U1-1-30-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	394.9	407.1	413.9	418.7	413.3	422.1	423.5	418.0	410.5
115°	450.7	461.6	468.4	475.9	473.9	477.3	480.0	472.5	465.7
117.5°	503.1	516.8	520.8	528.3	531.0	528.3	531.0	524.9	518.8
120°	558.3	569.2	571.9	578.7	582.1	578.0	581.4	576.0	569.2
122.5°	608.0	617.5	624.3	627.0	630.4	625.7	629.8	623.6	617.5
125°	655.0	665.2	675.4	674.7	678.1	672.7	677.4	669.9	664.5
127.5°	699.9	710.1	722.4	720.3	723.0	717.6	723.7	714.9	710.1
130°	743.5	755.7	766.6	763.9	766.6	761.9	767.3	759.1	754.4
132.5°	790.4	802.0	808.8	806.1	806.1	803.4	810.9	802.0	795.2
135°	835.4	842.9	849.7	845.6	845.6	842.9	851.0	842.9	834.7
137.5°	873.5	881.7	886.4	883.7	883.7	880.3	888.5	881.0	872.8
140°	910.3	917.8	921.8	918.4	918.4	915.7	923.9	917.8	908.9
142.5°	946.4	953.2	957.2	951.8	951.8	949.1	959.3	952.5	942.3
145°	981.8	986.5	991.3	983.1	983.8	979.7	992.0	985.2	975.6
147.5°	1008.3	1017.2	1022.6	1013.1	1013.1	1009.7	1022.6	1015.8	1004.9
150°	1040.3	1043.7	1049.8	1041.7	1041.0	1038.3	1050.5	1043.0	1033.5
152.5°	1062.1	1070.3	1075.7	1066.9	1066.2	1062.8	1076.4	1068.2	1058.7
155°	1088.6	1092.1	1098.9	1090.7	1088.6	1087.3	1100.2	1090.0	1082.5
157.5°	1107.7	1111.8	1121.3	1113.8	1108.4	1110.4	1120.6	1109.1	1102.9
160°	1127.5	1128.8	1139.7	1132.2	1126.1	1128.8	1139.0	1124.7	1122.7
162.5°	1144.5	1145.2	1155.4	1146.5	1141.8	1142.4	1154.7	1140.4	1137.0
165°	1156.7	1155.4	1165.6	1158.1	1154.7	1154.7	1165.6	1152.6	1152.0
167.5°	1168.3	1167.6	1172.4	1167.6	1166.9	1163.5	1171.7	1162.9	1164.9
170°	1177.2	1174.4	1177.2	1170.3	1170.3	1166.9	1177.8	1170.3	1173.1
172.5°	1185.3	1179.9	1179.9	1170.3	1168.3	1167.6	1180.6	1176.5	1180.6
175°	1187.4	1182.6	1180.6	1170.3	1162.2	1168.3	1181.2	1178.5	1185.3
177.5°	1189.4	1181.9	1179.9	1167.6	1165.6	1166.3	1180.6	1179.2	1187.4
180°	1175.8	1175.8	1175.8	1175.8	1175.8	1175.8	1175.8	1175.8	1175.8

(END OF REPORT)