

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: P199387

Luminaire Tested: **S122-DIW-U1-1-35-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199387  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27883 P27986)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122-DIW-U1-1-35-0048-1D-UDD-1-NA-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT WALL LED LUMINAIRE  
UPLIGHT LL1-3500K, NO LENS  
DOWNLIGHT LL1-3500K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

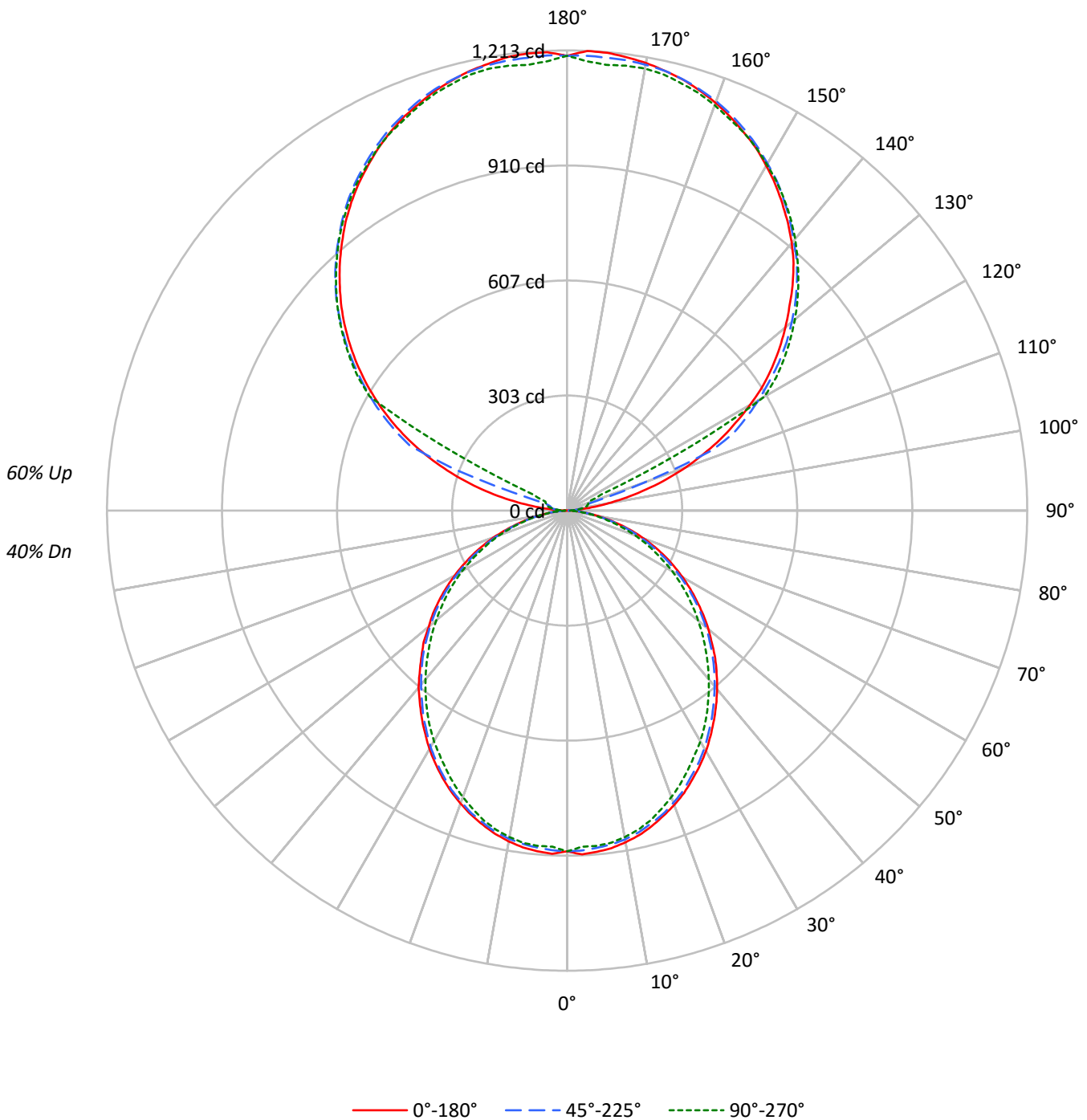
Lumens per Lamp: N/A  
Luminaire Lumens: 5713.6 lumens  
Efficiency: N/A  
Efficacy: 109.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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									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	105	105	105	105	96	96	96	96	78	78	78	62	62	62	47	47	47	40																				
1	96	91	88	84	87	83	80	77	68	66	64	55	53	52	42	41	40	34																				
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	37	35	34	29																				
3	79	70	63	57	72	64	58	53	53	48	45	42	39	37	33	31	29	24																				
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	29	27	25	21																				
5	67	55	47	41	60	51	44	38	42	37	33	34	30	27	26	24	22	18																				
6	61	49	41	36	56	45	38	33	38	32	28	31	27	24	24	21	19	16																				
7	57	45	37	31	51	41	34	29	34	29	25	28	24	21	22	19	17	14																				
8	53	40	33	28	48	37	30	26	31	26	22	25	21	19	20	17	15	13																				
9	49	37	29	24	44	34	27	23	28	23	20	23	19	17	18	16	14	11																				
10	46	34	27	22	42	31	25	20	26	21	18	21	18	15	17	14	12	10																				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	14204	14204	14204
5°	14221	11766	14199
10°	14029	10047	13996
15°	13764	8642	13708
20°	13450	7436	13383
25°	13076	6418	13006
30°	12697	5578	12588
35°	12234	4827	12122
40°	11783	4152	11676
45°	11312	3552	11114
50°	10783	3013	10552
55°	10192	2523	10024
60°	9593	2068	9344
65°	8861	1624	8558
70°	7950	1221	7566
75°	6640	822	6194
80°	4953	478	4492
85°	3072	189	2585



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.7	1.5
10°-20°	239.7	4.2
20°-30°	353.5	6.2
30°-40°	412.3	7.2
40°-50°	413.1	7.2
50°-60°	361.4	6.3
60°-70°	265.9	4.7
70°-80°	144.1	2.5
80°-90°	36.9	0.6
90°-100°	29.7	0.5
100°-110°	134.6	2.4
110°-120°	391.3	6.8
120°-130°	611.5	10.7
130°-140°	659.2	11.5
140°-150°	623.0	10.9
150°-160°	508.0	8.9
160°-170°	330.6	5.8
170°-180°	113.9	2.0
0°-30°	677.9	11.9
0°-40°	1090.2	19.1
0°-60°	1864.7	32.6
0°-90°	2311.7	40.5
90°-120°	555.7	9.7
90°-150°	2449.4	42.9
90°-180°	3402.0	59.5
0°-180°	5713.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	898	898	898	898	898	
5°	903	892	887	892	902	86
15°	861	854	846	853	858	243
25°	781	774	754	772	777	360
35°	674	665	644	660	668	422
45°	552	542	516	537	542	425
55°	418	410	386	403	411	374
65°	283	272	253	264	274	280
75°	146	139	126	130	136	155
85°	35	33	28	28	29	39
90°	1	4	5	4	1	3
95°	29	24	27	28	51	41
105°	216	46	56	47	254	230
115°	447	485	99	501	478	440
125°	660	681	698	692	677	589
135°	840	857	862	865	848	648
145°	988	997	999	1004	992	619
155°	1101	1108	1100	1109	1102	508
165°	1177	1177	1166	1175	1174	332
175°	1211	1198	1179	1198	1209	115
180°	1199	1199	1199	1199	1199	



TEST NUMBER: P199387

CATALOG NUMBER: S122-DIW-U1-1-35-0048-1D-UDD-1-NA-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	898.1	898.1	898.1	898.1	898.1	898.1	898.1	898.1	898.1
2.5°	907.1	894.6	896.7	893.9	887.0	893.2	896.0	893.9	905.7
5°	902.9	890.4	892.5	889.0	887.0	889.0	891.8	889.0	901.5
7.5°	897.4	883.5	887.7	885.6	883.5	884.9	887.0	882.1	895.3
10°	887.7	873.8	880.0	875.8	873.8	875.2	878.6	871.7	885.6
12.5°	876.5	862.7	868.9	864.0	862.0	862.0	868.2	860.6	873.1
15°	861.3	850.1	854.3	849.5	846.0	848.1	852.9	847.4	857.8
17.5°	843.9	834.2	839.0	831.4	825.1	830.0	837.0	830.7	841.1
20°	825.8	814.7	819.6	809.2	803.6	807.8	816.8	811.9	821.7
22.5°	805.7	795.3	799.4	785.6	780.0	783.5	796.7	791.8	800.8
25°	781.4	773.1	773.7	759.9	753.6	757.8	771.7	768.9	777.2
27.5°	757.8	749.4	750.1	734.2	727.2	732.8	746.7	744.6	752.2
30°	732.1	724.4	723.7	707.8	702.2	705.7	719.6	719.6	725.8
32.5°	703.6	697.3	693.9	679.3	673.7	677.9	689.7	691.8	696.6
35°	674.4	670.3	665.4	651.5	643.9	649.4	660.5	663.3	668.2
37.5°	645.3	640.4	634.8	620.9	612.6	619.6	629.3	634.1	637.6
40°	614.7	611.2	605.0	591.1	580.7	587.6	598.7	604.3	609.1
42.5°	583.4	581.4	573.7	559.1	548.7	556.3	568.2	573.0	575.1
45°	552.2	549.4	542.5	527.2	516.1	524.4	536.9	541.8	542.5
47.5°	517.5	518.1	509.8	494.5	483.4	491.8	502.9	509.8	512.6
50°	486.2	486.9	477.2	461.9	450.8	457.0	470.2	477.2	475.8
52.5°	452.9	454.9	444.5	429.2	418.1	424.4	437.6	445.2	445.9
55°	418.1	421.6	410.5	395.2	385.5	391.7	402.8	411.9	411.2
57.5°	384.8	387.6	376.5	362.6	352.8	358.4	368.1	379.9	377.1
60°	351.5	354.2	342.4	328.5	320.2	323.0	334.1	343.8	342.4
62.5°	317.4	320.2	307.7	295.2	285.5	289.6	299.4	311.2	307.7
65°	283.4	285.5	272.3	261.2	252.8	257.0	263.9	276.4	273.7
67.5°	249.3	250.7	238.9	228.5	221.6	223.7	229.9	240.3	238.9
70°	215.3	216.7	205.6	195.9	189.6	191.7	196.6	206.3	204.9
72.5°	180.6	182.7	171.6	162.5	156.3	158.4	161.8	170.9	168.8
75°	145.9	147.2	138.9	132.0	126.4	127.1	129.9	136.8	136.1
77.5°	113.9	117.4	108.4	102.1	97.9	98.6	102.1	105.6	104.2
80°	82.7	86.8	80.6	75.7	72.2	71.5	74.3	77.1	75.0
82.5°	58.3	59.0	54.9	51.4	47.9	47.9	50.0	52.1	50.0
85°	34.7	36.1	32.6	29.9	27.8	27.1	28.5	30.6	29.2
87.5°	16.7	17.4	13.9	12.5	10.4	9.7	10.4	11.8	11.8
90°	1.4	3.5	3.5	4.2	4.9	4.9	4.2	4.2	0.7
92.5°	4.2	9.7	9.7	11.8	12.5	14.6	16.7	17.4	18.8
95°	29.2	20.8	23.6	25.7	27.1	29.2	27.8	25.7	50.7
97.5°	65.3	26.4	33.3	34.7	36.8	37.5	37.5	29.2	92.4
100°	109.0	30.6	39.6	45.1	46.5	46.5	42.4	65.3	142.4
102.5°	160.4	136.1	43.1	50.0	52.8	50.7	45.1	221.6	198.0
105°	216.0	245.2	45.8	52.8	55.6	54.2	47.2	273.0	254.2
107.5°	274.4	297.3	48.6	55.6	58.3	56.3	57.6	325.8	310.5
110°	332.7	352.1	218.1	57.6	60.4	57.6	302.1	379.2	366.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	388.3	408.4	409.8	61.1	61.8	66.0	449.4	433.4	423.0
115°	446.6	463.3	484.8	282.0	98.6	310.5	500.8	486.9	477.9
117.5°	500.1	516.1	532.7	495.9	377.8	539.7	550.1	539.7	530.6
120°	556.3	572.3	582.7	599.4	600.8	600.8	598.7	590.4	580.7
122.5°	611.9	622.3	630.7	647.3	652.9	646.6	645.3	637.6	630.0
125°	660.5	670.3	681.4	692.5	698.0	691.8	692.5	682.8	677.2
127.5°	706.4	714.7	729.3	736.2	741.8	734.9	737.6	727.2	723.0
130°	750.8	756.4	773.1	778.6	783.5	779.3	781.4	770.3	766.8
132.5°	794.6	802.2	816.1	818.2	823.8	817.5	825.1	809.9	808.5
135°	840.4	846.7	857.1	857.8	862.0	858.5	864.7	852.2	848.1
137.5°	883.5	886.3	895.3	892.5	898.8	893.2	902.2	889.7	887.0
140°	921.0	923.1	929.3	930.7	934.9	930.0	937.0	924.5	923.1
142.5°	955.7	958.5	964.1	963.4	968.2	963.4	971.7	960.6	959.2
145°	988.4	992.5	997.4	995.3	998.8	996.0	1004.3	992.5	991.8
147.5°	1021.0	1022.4	1029.3	1025.9	1028.0	1024.5	1033.5	1023.8	1022.4
150°	1049.5	1052.3	1056.4	1052.3	1053.0	1050.9	1059.9	1051.6	1050.2
152.5°	1078.0	1077.3	1083.5	1075.2	1078.7	1075.2	1085.6	1077.3	1077.3
155°	1100.9	1100.2	1107.8	1098.8	1100.2	1097.4	1109.2	1099.5	1101.6
157.5°	1123.8	1120.3	1129.4	1120.3	1117.6	1119.6	1128.7	1119.6	1123.8
160°	1143.9	1140.5	1148.8	1139.1	1137.0	1138.4	1148.1	1139.8	1141.2
162.5°	1161.3	1156.5	1164.1	1153.7	1153.7	1151.6	1164.1	1155.8	1159.9
165°	1176.6	1171.0	1177.3	1166.9	1165.5	1164.1	1175.2	1169.6	1173.8
167.5°	1187.7	1182.2	1187.7	1175.9	1177.3	1174.5	1185.6	1182.2	1187.0
170°	1198.1	1191.2	1193.3	1182.8	1182.8	1180.8	1192.6	1189.1	1196.0
172.5°	1205.1	1197.4	1197.4	1185.6	1182.8	1184.2	1196.7	1196.0	1205.8
175°	1211.3	1200.9	1198.1	1187.0	1179.4	1186.3	1198.1	1200.2	1209.2
177.5°	1212.7	1203.0	1200.2	1187.7	1185.6	1186.3	1200.9	1201.6	1209.2
180°	1198.8	1198.8	1198.8	1198.8	1198.8	1198.8	1198.8	1198.8	1198.8

(END OF REPORT)