

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735920

Luminaire Tested: S122RDRP-S485D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735920
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S485D927-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

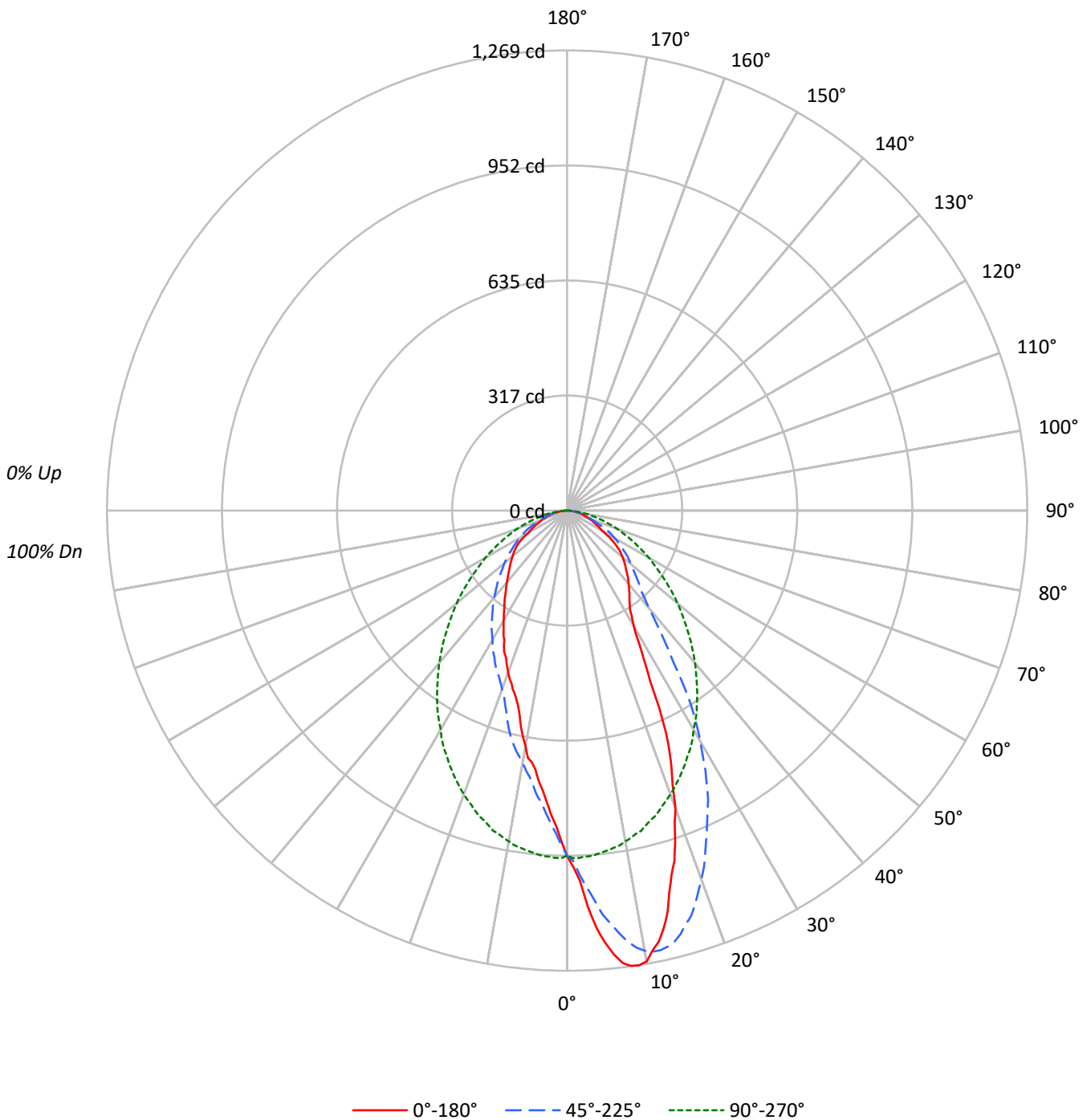
Lumens per Lamp: N/A
Luminaire Lumens: 1630.1 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
Input Voltage (V): 120
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: 24 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					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				100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	18285	18285	18285	18285	18285
5°	23069	21579	18355	15596	14934
10°	24641	24062	18077	13801	12895
15°	21674	24054	17599	12373	10746
20°	17867	22138	17037	10743	9724
25°	12740	19435	16354	9949	8748
30°	8152	16302	15476	9129	7770
35°	7021	12014	14673	8471	7046
40°	6617	8785	13765	7836	6474
45°	6252	7527	12798	7263	6111
50°	5954	6860	11889	6758	5885
55°	5462	6347	10871	6210	5673
60°	4309	5786	9984	5828	4794
65°	3902	5176	9055	5412	4371
70°	3602	4181	8228	4659	4018
75°	3357	3780	7181	4166	3780
80°	3099	3420	6077	3741	3420
85°	2779	3021	4675	3286	3021

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 17914 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.3	5.7
10°-20°	247.9	15.2
20°-30°	311.0	19.1
30°-40°	296.3	18.2
40°-50°	261.4	16.0
50°-60°	205.6	12.6
60°-70°	131.2	8.0
70°-80°	66.7	4.1
80°-90°	17.7	1.1
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°	651.2	39.9
0°-40°	947.5	58.1
0°-60°	1414.5	86.8
0°-90°	1630.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1630.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	951	951	951	951	951	
5°	1196	1118	951	808	774	116
15°	1089	1209	884	622	540	302
25°	601	916	771	469	412	271
35°	299	512	625	361	300	190
45°	230	277	471	267	225	178
55°	163	189	324	185	169	143
65°	86	114	199	119	96	86
75°	45	51	97	56	51	48
85°	13	14	21	15	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	951.3	951.3	951.3	951.3	951.3	951.3	951.3	951.3	951.3
1°	983.4	987.9	966.8	969.1	958.8	940.5	922.7	924.4	911.9
2°	1022.8	1034.9	1005.7	987.9	958.2	926.2	890.7	886.1	870.7
3°	1094.4	1088.6	1040.6	1004.5	955.9	907.9	863.2	852.9	839.8
4°	1152.1	1135.0	1076.0	1025.7	954.8	886.7	836.4	818.6	805.5
5°	1195.6	1173.9	1118.4	1041.7	951.3	874.7	808.3	788.3	774.0
6°	1230.5	1213.9	1145.8	1056.6	946.8	856.9	791.7	764.8	750.0
7°	1257.4	1243.7	1173.9	1076.6	942.8	839.2	765.4	737.4	719.7
8°	1267.7	1261.4	1199.6	1090.9	938.2	826.6	742.0	716.8	700.8
9°	1269.4	1270.0	1220.2	1104.6	934.2	803.7	725.4	699.6	691.0
10°	1262.5	1267.7	1232.8	1120.1	926.2	792.3	707.1	682.5	660.7
11°	1235.7	1258.5	1239.1	1130.4	919.3	774.0	691.0	659.0	637.3
12°	1215.6	1237.4	1239.7	1143.5	911.3	765.4	677.3	634.4	611.5
13°	1182.4	1205.3	1233.9	1147.0	906.7	744.3	660.2	609.2	581.2
14°	1143.0	1179.6	1224.8	1154.4	895.3	725.9	643.0	573.8	557.2
15°	1089.2	1141.3	1208.8	1157.3	884.4	713.4	621.8	556.0	540.0
16°	1044.6	1103.5	1187.0	1157.3	877.5	696.2	598.9	540.6	524.6
17°	1010.8	1058.9	1169.3	1157.9	866.1	684.2	576.1	526.3	513.7
18°	963.3	1017.1	1141.3	1155.6	854.1	669.9	556.6	514.3	498.8
19°	910.7	974.8	1111.5	1151.6	843.8	655.0	536.0	501.7	488.5
20°	873.5	932.5	1082.3	1145.3	832.9	645.3	525.2	487.4	475.4
21°	811.2	883.3	1053.2	1136.7	821.5	628.7	510.3	474.8	461.7
22.5°	747.7	814.0	999.4	1122.4	802.6	608.1	493.7	459.4	439.9
23°	723.1	797.5	982.8	1118.4	796.3	603.0	488.5	452.5	435.3
24°	670.5	747.7	948.5	1105.8	782.6	585.8	478.8	438.8	426.8
25°	600.7	705.4	916.4	1092.6	771.1	573.2	469.1	427.9	412.5
26°	521.7	647.6	887.3	1076.6	755.1	556.0	455.9	417.6	395.9
27°	473.1	597.8	847.8	1059.5	743.7	543.5	445.1	402.2	386.7
28°	434.2	519.4	812.3	1042.9	729.9	528.0	437.6	391.3	373.0
29°	391.9	476.5	770.6	1020.6	715.1	510.3	425.6	380.4	361.0
30°	367.3	430.8	734.5	1004.0	697.3	498.3	411.3	369.6	350.1
32.5°	322.6	355.2	636.7	956.5	663.6	463.9	387.9	339.8	323.2
35°	299.2	316.3	512.0	901.0	625.3	435.3	361.0	315.2	300.3
37.5°	281.5	291.8	422.8	841.5	586.4	410.2	336.4	292.3	278.0
40°	263.7	271.7	350.1	784.3	548.6	385.6	312.3	268.9	258.0
42.5°	247.7	254.0	303.8	727.7	509.7	360.4	288.9	250.6	240.8
45°	230.0	235.7	276.9	659.0	470.8	334.7	267.2	230.5	224.8
47.5°	215.1	219.1	251.1	597.8	432.5	310.1	244.8	214.5	210.5
50°	199.1	204.2	229.4	529.7	397.6	286.0	226.0	200.2	196.8
52.5°	183.6	185.9	211.1	461.7	361.0	262.6	205.9	185.9	183.6
55°	163.0	172.2	189.4	391.9	324.4	240.8	185.3	171.0	169.3
57.5°	139.6	151.6	169.9	328.9	290.0	216.8	168.8	157.3	149.9
60°	112.1	126.4	150.5	273.4	259.7	195.1	151.6	133.9	124.7
62.5°	98.4	103.0	132.7	228.8	228.8	174.5	134.4	115.0	111.0
65°	85.8	89.2	113.8	189.4	199.1	151.6	119.0	99.5	96.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	74.9	77.8	87.0	157.9	171.6	132.1	98.4	87.0	82.9
70°	64.1	66.4	74.4	128.7	146.4	112.7	82.9	74.4	71.5
72.5°	54.3	56.6	61.2	96.7	120.1	93.8	69.8	63.5	61.2
75°	45.2	46.3	50.9	72.1	96.7	74.9	56.1	52.1	50.9
77.5°	36.6	37.2	40.0	51.5	74.9	57.2	45.2	41.8	41.2
80°	28.0	28.6	30.9	37.2	54.9	41.2	33.8	32.0	30.9
82.5°	20.0	20.6	21.7	25.2	37.2	28.0	24.0	23.5	21.7
85°	12.6	12.6	13.7	15.4	21.2	16.0	14.9	14.3	13.7
87.5°	5.7	5.7	6.3	6.3	9.7	6.9	6.9	6.3	5.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	16.53	18.00	16.90	18.31	18.63	19.23	20.70	19.59	21.01	21.32
	3H	17.65	18.96	18.03	19.29	19.65	20.67	21.98	21.05	22.31	22.67
	4H	18.09	19.32	18.49	19.67	20.05	21.17	22.40	21.57	22.75	23.13
	6H	18.43	19.57	18.85	19.94	20.33	21.50	22.63	21.91	23.00	23.39
	8H	18.55	19.63	18.98	20.02	20.42	21.59	22.67	22.01	23.06	23.46
	12H	18.62	19.66	19.05	20.04	20.47	21.63	22.67	22.06	23.05	23.48
4H	2H	17.70	18.93	18.10	19.28	19.66	19.68	20.91	20.08	21.26	21.64
	3H	18.93	19.95	19.34	20.35	20.75	21.34	22.36	21.75	22.76	23.16
	4H	19.41	20.32	19.84	20.74	21.18	21.98	22.89	22.41	23.31	23.75
	6H	19.81	20.61	20.27	21.05	21.51	22.43	23.23	22.89	23.67	24.13
	8H	19.94	20.69	20.41	21.13	21.60	22.56	23.30	23.02	23.75	24.22
	12H	20.04	20.71	20.53	21.19	21.66	22.64	23.30	23.12	23.78	24.25
8H	4H	19.81	20.55	20.27	21.00	21.47	22.09	22.83	22.55	23.28	23.75
	6H	20.30	20.91	20.80	21.41	21.88	22.65	23.26	23.15	23.76	24.23
	8H	20.49	21.04	21.01	21.55	22.04	22.85	23.40	23.37	23.91	24.40
	12H	20.65	21.13	21.16	21.63	22.19	23.00	23.48	23.51	23.98	24.54
12H	4H	19.86	20.52	20.34	21.00	21.47	22.08	22.74	22.56	23.22	23.69
	6H	20.37	20.92	20.89	21.43	21.92	22.65	23.20	23.16	23.71	24.20
	8H	20.61	21.10	21.12	21.59	22.16	22.89	23.38	23.40	23.87	24.44