

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1058583

Luminaire Tested: S122RDR-H865D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058583
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H865D940-X4F0-XX-UDD-BVL-W
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

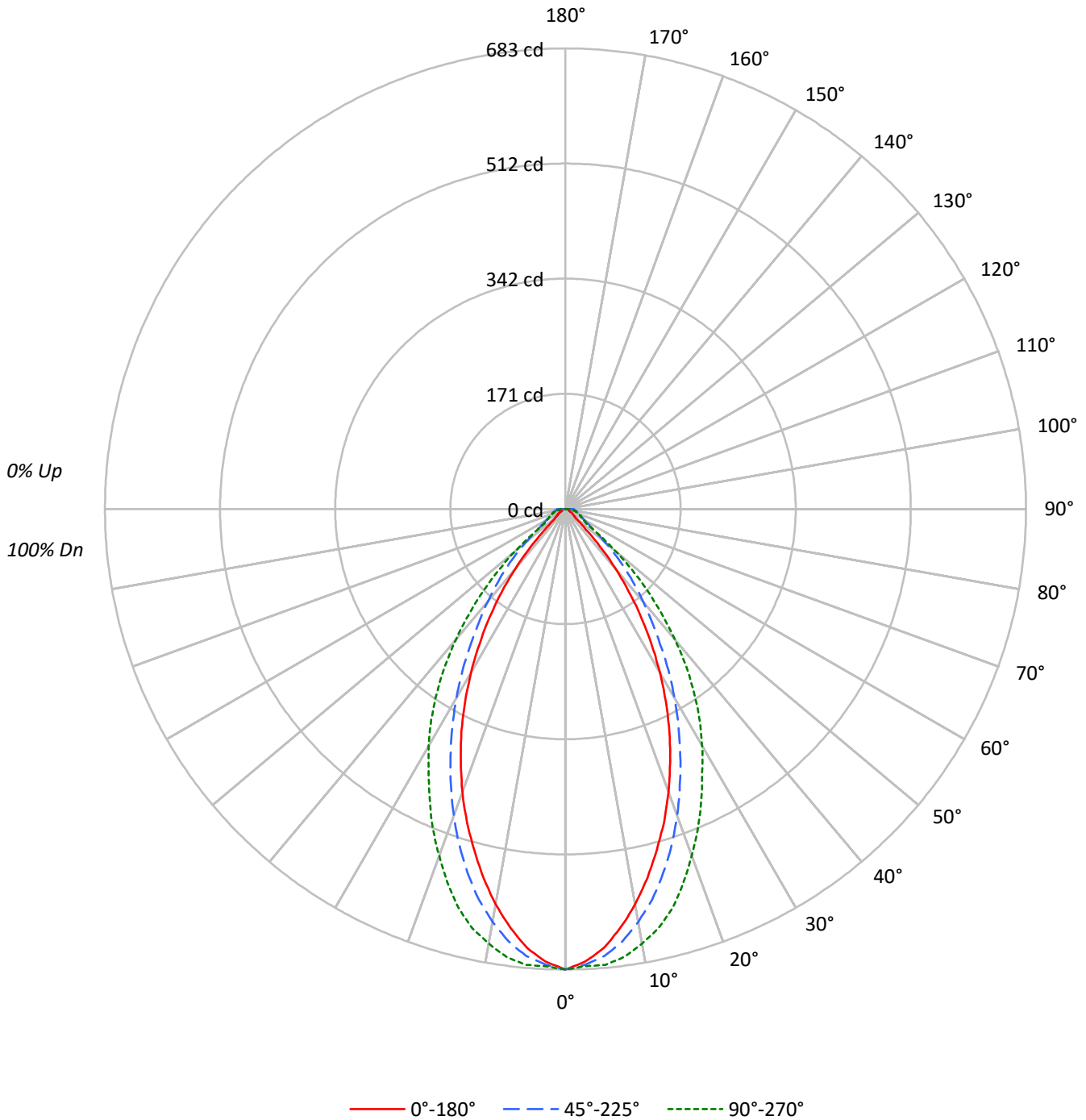
Lumens per Lamp: N/A
Luminaire Lumens: 743.3 lumens
Efficiency: N/A
Efficacy: 23.8 lumens/watt
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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

TEST NUMBER: P1058583

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-BVL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1058583

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-BVL-W

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	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90			90	
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81			81	
3	98	91	85	80	96	89	84	79	86	82	78	84	80	76	81	78	75	74			74	
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67			67	
5	87	77	70	65	85	76	70	65	74	69	64	72	67	64	71	66	63	61			61	
6	82	72	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56			56	
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52			52	
8	73	62	55	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48			48	
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46	45			45	
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43	42			42	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12601	12601	12601
5°	12103	12325	12570
10°	11158	11649	12263
15°	9999	10688	11710
20°	8776	9506	10749
25°	7431	8209	9700
30°	5960	6891	8638
35°	4406	5514	7483
40°	2763	4317	6080
45°	1083	3252	4504
50°	534	2196	2762
55°	421	1441	1229
60°	321	1170	1129
65°	240	1096	1096
70°	297	1122	1122
75°	314	1248	1169
80°	468	1626	1275
85°	932	2774	1842

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 87.5°
 Luminance: 5076 cd/sqm



TEST NUMBER: P1058583

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-BVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.4	8.4
10°-20°	157.7	21.2
20°-30°	188.7	25.4
30°-40°	158.8	21.4
40°-50°	90.4	12.2
50°-60°	35.7	4.8
60°-70°	22.4	3.0
70°-80°	16.7	2.2
80°-90°	10.6	1.4
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°	408.7	55.0
0°-40°	567.5	76.3
0°-60°	693.6	93.3
0°-90°	743.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	743.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	683	683	683	683	683	
5°	653	668	665	673	679	60
15°	523	542	560	592	613	146
25°	365	381	403	445	476	166
35°	196	213	245	297	332	121
45°	42	73	125	156	173	39
55°	13	28	45	46	38	12
65°	6	25	25	24	25	6
75°	4	18	18	16	16	5
85°	4	12	13	12	9	4
90°	0	0	0	0	0	



TEST NUMBER: P1058583

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-BVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	682.9	682.9	682.9	682.9	682.9
2.5°	672.0	684.0	676.4	677.5	678.6
5°	653.4	667.6	665.4	673.1	678.6
7.5°	626.1	641.4	646.9	660.0	669.8
10°	595.5	613.0	621.7	642.5	654.5
12.5°	560.5	580.2	593.3	619.6	637.0
15°	523.4	542.0	559.5	592.2	613.0
17.5°	486.2	504.8	523.4	559.5	581.3
20°	446.9	464.4	484.1	522.3	547.4
22.5°	405.4	424.0	443.6	483.0	513.6
25°	365.0	381.3	403.2	444.7	476.4
27.5°	322.3	338.7	362.8	405.4	439.3
30°	279.7	296.1	323.4	367.1	405.4
32.5°	237.1	254.6	284.1	332.2	370.4
35°	195.6	213.1	244.8	297.2	332.2
37.5°	155.2	174.8	209.8	261.2	293.9
40°	114.7	137.7	179.2	225.1	252.4
42.5°	76.5	104.9	150.8	189.0	212.0
45°	41.5	73.2	124.6	156.3	172.6
47.5°	22.9	47.0	99.4	124.6	134.4
50°	18.6	32.8	76.5	95.1	96.2
52.5°	15.3	29.5	56.8	67.7	62.3
55°	13.1	28.4	44.8	45.9	38.2
57.5°	10.9	27.3	37.2	32.8	32.8
60°	8.7	27.3	31.7	29.5	30.6
62.5°	6.6	27.3	28.4	26.2	27.3
65°	5.5	25.1	25.1	24.0	25.1
67.5°	5.5	22.9	22.9	21.9	22.9
70°	5.5	21.9	20.8	20.8	20.8
72.5°	4.4	19.7	19.7	18.6	18.6
75°	4.4	17.5	17.5	16.4	16.4
77.5°	4.4	16.4	16.4	15.3	14.2
80°	4.4	14.2	15.3	14.2	12.0
82.5°	4.4	13.1	14.2	13.1	9.8
85°	4.4	12.0	13.1	12.0	8.7
87.5°	3.3	12.0	12.0	9.8	6.6
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058583
 CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-BVL-W

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	6.49	7.71	6.85	8.02	8.34	8.52	9.74	8.89	10.06	10.37
	3H	8.04	9.12	8.42	9.45	9.82	10.50	11.58	10.88	11.91	12.28
	4H	8.60	9.61	9.00	9.96	10.35	11.41	12.42	11.82	12.78	13.16
	6H	9.16	10.09	9.57	10.46	10.85	12.29	13.22	12.71	13.59	13.99
	8H	9.45	10.33	9.88	10.72	11.13	12.69	13.57	13.13	13.97	14.37
	12H	9.82	10.66	10.25	11.04	11.47	13.13	13.97	13.57	14.36	14.79
4H	2H	7.67	8.69	8.08	9.04	9.42	9.14	10.15	9.54	10.50	10.89
	3H	9.88	10.72	10.30	11.12	11.53	11.39	12.22	11.80	12.63	13.03
	4H	10.94	11.69	11.37	12.11	12.55	12.46	13.21	12.90	13.63	14.07
	6H	11.84	12.48	12.30	12.93	13.40	13.57	14.22	14.03	14.66	15.13
	8H	12.22	12.83	12.69	13.28	13.75	14.09	14.69	14.56	15.14	15.61
	12H	12.64	13.18	13.13	13.66	14.14	14.66	15.20	15.15	15.68	16.15
8H	4H	11.74	12.35	12.21	12.79	13.27	12.95	13.56	13.42	14.01	14.48
	6H	13.12	13.62	13.63	14.12	14.60	14.35	14.84	14.85	15.34	15.82
	8H	13.84	14.29	14.36	14.80	15.30	15.08	15.53	15.61	16.05	16.54
	12H	14.59	14.99	15.11	15.48	16.05	15.91	16.31	16.43	16.80	17.37
12H	4H	11.90	12.44	12.39	12.92	13.40	13.05	13.59	13.54	14.07	14.55
	6H	13.45	13.90	13.98	14.42	14.91	14.56	15.01	15.09	15.53	16.02
	8H	14.37	14.76	14.88	15.26	15.83	15.45	15.84	15.96	16.34	16.91