

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: P1058544

Luminaire Tested: S122RDR-H865D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058544
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-55)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H865D840-X4F0-XX-UDD-WVL-W
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

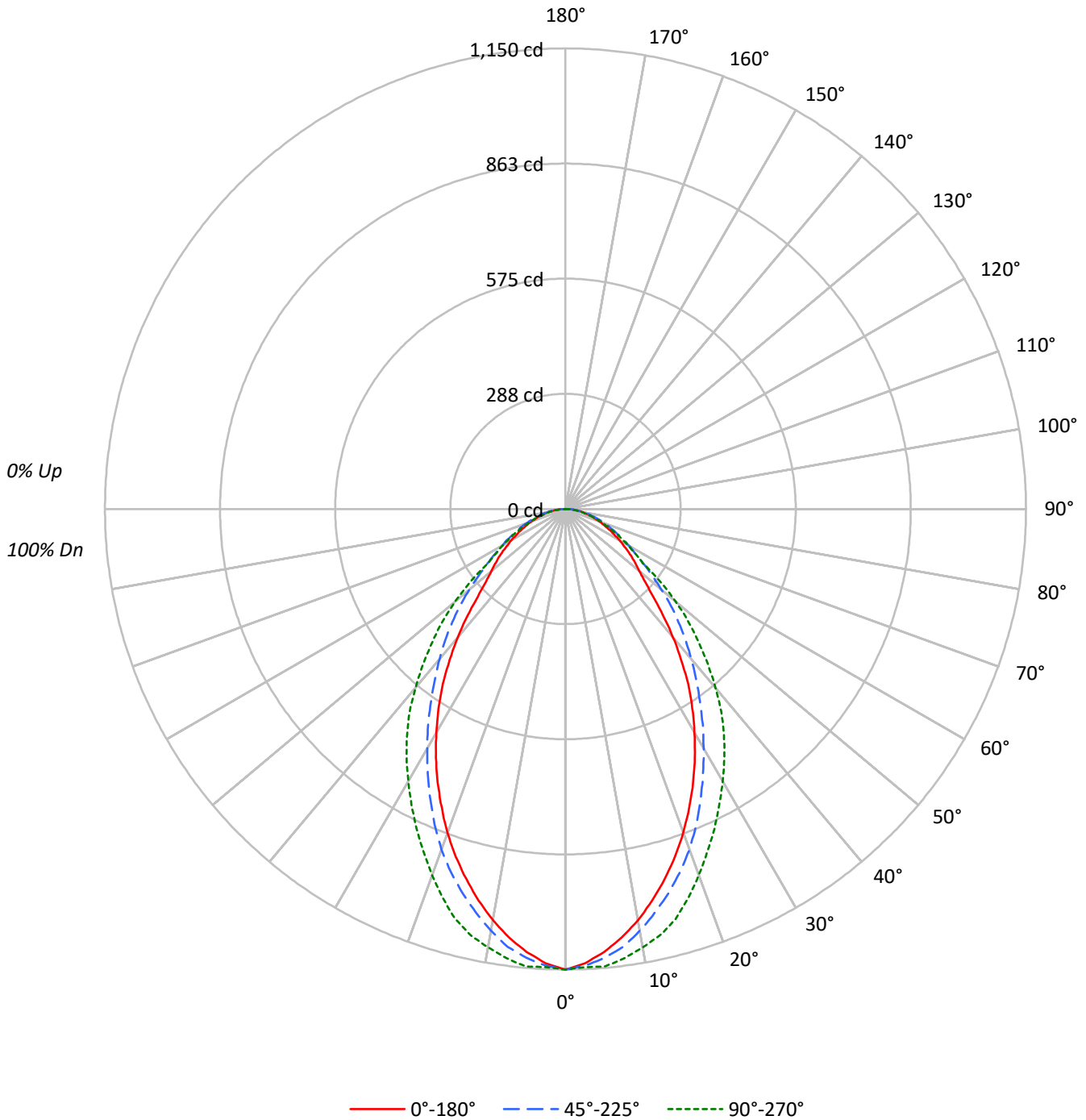
Lumens per Lamp: N/A
Luminaire Lumens: 1874.6 lumens
Efficiency: N/A
Efficacy: 60.1 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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: P1058544

CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-WVL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1058544

CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-WVL-W

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																				
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87																				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																				
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	67																				
4	88	77	69	64	85	76	69	63	73	67	62	71	66	62	69	65	61	59																				
5	81	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52																				
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47																				
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43																				
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	41	39																				
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36																				
10	59	47	40	35	58	46	40	35	46	39	35	45	39	35	44	38	34	33																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21218	21218	21218
5°	20566	20840	21231
10°	19530	20039	20826
15°	18282	18966	20267
20°	16899	17773	19108
25°	15356	16262	17923
30°	13726	14700	16728
35°	12031	13173	15541
40°	10066	11765	14029
45°	8066	10423	12260
50°	6921	8980	10294
55°	6325	7637	7599
60°	5750	6754	6617
65°	5235	6047	5777
70°	4802	5535	5136
75°	4499	5112	4499
80°	4208	4729	3942
85°	4192	4975	3409

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 12260 cd/sqm



TEST NUMBER: P1058544

CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-WVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.1	5.7
10°-20°	281.0	15.0
20°-30°	370.7	19.8
30°-40°	373.2	19.9
40°-50°	303.8	16.2
50°-60°	207.1	11.0
60°-70°	134.4	7.2
70°-80°	74.0	3.9
80°-90°	24.1	1.3
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°	757.8	40.4
0°-40°	1131.1	60.3
0°-60°	1642.0	87.6
0°-90°	1874.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1874.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1150	1150	1150	1150	1150	
5°	1110	1131	1125	1135	1146	104
15°	957	982	993	1034	1061	268
25°	754	779	799	835	880	346
35°	534	561	585	636	690	332
45°	309	347	399	434	470	244
55°	197	216	237	239	236	176
65°	120	142	138	131	132	119
75°	63	78	72	64	63	67
85°	20	26	24	18	16	22
90°	0	0	0	0	0	

TEST NUMBER: P1058544

CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-WVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1149.9	1149.9	1149.9	1149.9	1149.9
2.5°	1135.0	1153.6	1141.2	1142.5	1144.9
5°	1110.3	1131.3	1125.1	1135.0	1146.2
7.5°	1079.4	1100.4	1102.9	1117.7	1131.3
10°	1042.3	1065.8	1069.5	1091.8	1111.5
12.5°	1001.5	1027.5	1032.4	1064.6	1090.5
15°	957.0	981.7	992.8	1033.6	1060.9
17.5°	910.0	933.5	950.8	987.9	1018.8
20°	860.6	882.8	905.1	938.4	973.1
22.5°	807.4	832.1	853.1	886.5	926.1
25°	754.2	778.9	798.7	834.6	880.3
27.5°	699.8	724.5	744.3	782.7	832.1
30°	644.2	670.1	689.9	733.2	785.1
32.5°	589.8	615.7	638.0	683.7	738.1
35°	534.1	561.3	584.8	635.5	689.9
37.5°	474.8	505.7	535.4	586.1	639.2
40°	417.9	452.5	488.4	535.4	582.4
42.5°	361.0	399.4	443.9	483.4	526.7
45°	309.1	347.4	399.4	434.0	469.8
47.5°	268.3	300.5	356.1	384.5	416.7
50°	241.1	263.4	312.8	335.1	358.6
52.5°	218.8	237.4	272.0	286.9	299.2
55°	196.6	216.4	237.4	238.6	236.2
57.5°	174.3	196.6	207.7	199.1	204.0
60°	155.8	178.0	183.0	174.3	179.3
62.5°	136.0	160.7	160.7	152.1	154.6
65°	119.9	142.2	138.5	131.1	132.3
67.5°	103.9	126.1	119.9	112.5	112.5
70°	89.0	110.0	102.6	95.2	95.2
72.5°	75.4	92.7	87.8	79.1	77.9
75°	63.1	77.9	71.7	64.3	63.1
77.5°	50.7	63.1	58.1	51.9	49.5
80°	39.6	50.7	44.5	39.6	37.1
82.5°	29.7	38.3	33.4	28.4	26.0
85°	19.8	26.0	23.5	18.5	16.1
87.5°	9.9	17.3	14.8	12.4	9.9
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058544
 CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-WVL-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	17.33	18.77	17.70	19.08	19.40	17.58	19.02	17.95	19.33	19.65
	3H	18.86	20.15	19.24	20.48	20.84	18.94	20.23	19.32	20.55	20.92
	4H	19.42	20.63	19.82	20.98	21.36	19.42	20.62	19.82	20.97	21.35
	6H	19.85	20.96	20.26	21.33	21.72	19.77	20.88	20.18	21.25	21.64
	8H	20.00	21.06	20.43	21.45	21.85	19.88	20.93	20.30	21.32	21.73
	12H	20.11	21.12	20.54	21.51	21.94	19.95	20.96	20.38	21.34	21.77
4H	2H	17.90	19.11	18.31	19.46	19.84	18.10	19.31	18.50	19.66	20.04
	3H	19.71	20.71	20.12	21.11	21.51	19.68	20.68	20.09	21.08	21.48
	4H	20.45	21.35	20.88	21.76	22.21	20.27	21.17	20.71	21.59	22.03
	6H	21.04	21.82	21.50	22.26	22.72	20.74	21.52	21.20	21.97	22.43
	8H	21.25	21.98	21.71	22.42	22.89	20.89	21.62	21.36	22.07	22.53
	12H	21.41	22.06	21.90	22.54	23.01	21.00	21.65	21.48	22.13	22.60
8H	4H	20.72	21.44	21.18	21.89	22.36	20.56	21.29	21.03	21.74	22.21
	6H	21.47	22.07	21.97	22.57	23.04	21.15	21.75	21.65	22.25	22.73
	8H	21.80	22.34	22.31	22.85	23.34	21.38	21.92	21.89	22.43	22.92
	12H	22.08	22.56	22.59	23.05	23.62	21.56	22.04	22.07	22.53	23.10
12H	4H	20.73	21.38	21.21	21.86	22.33	20.60	21.25	21.08	21.73	22.20
	6H	21.52	22.06	22.03	22.57	23.06	21.22	21.76	21.74	22.27	22.76
	8H	21.91	22.39	22.42	22.88	23.45	21.51	21.98	22.02	22.48	23.04