

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: P1060641

Luminaire Tested: S124RDR-H1020D835-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060641
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D835-X4F0-XX-UDD-WVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

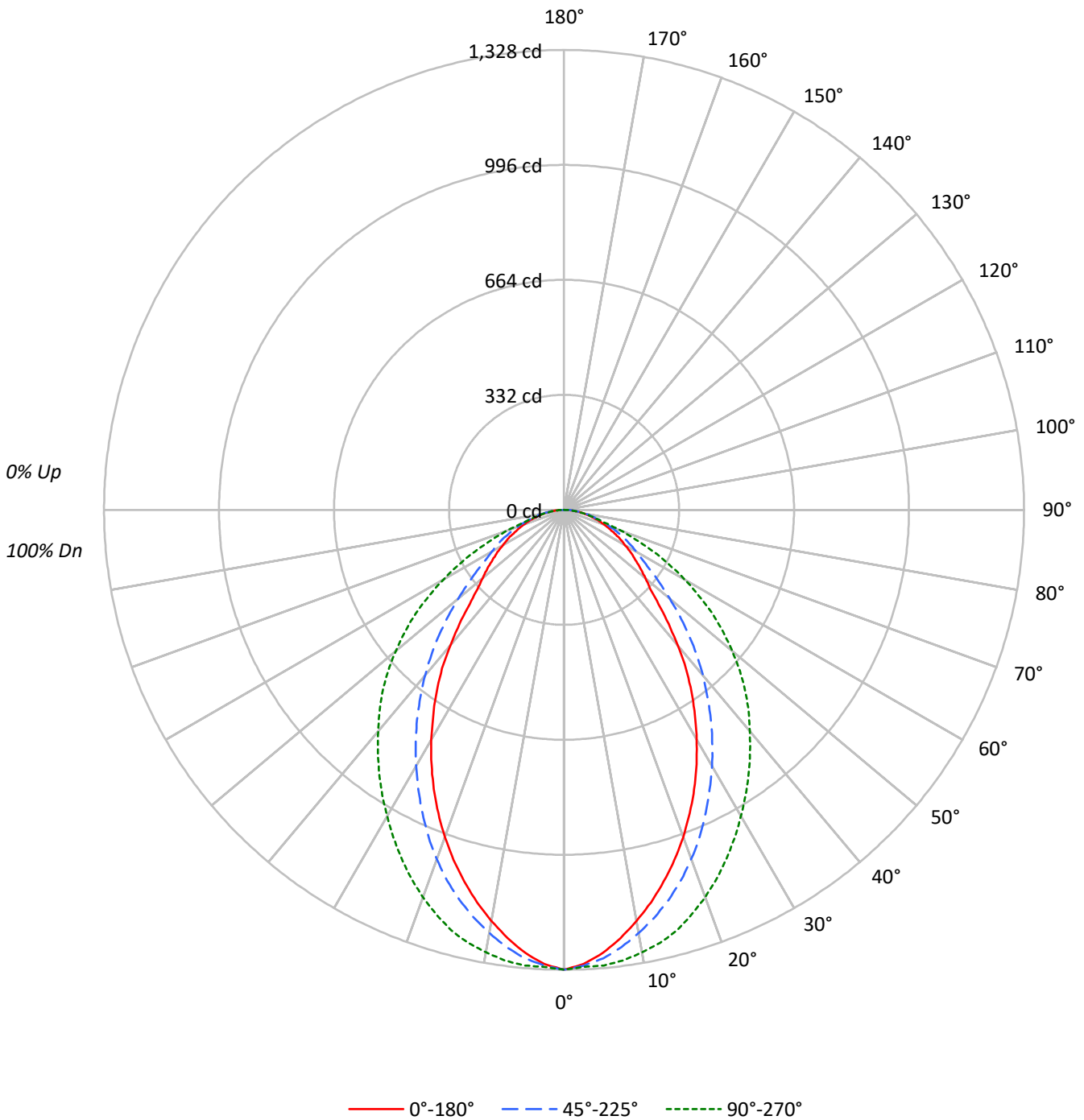
Lumens per Lamp: N/A
Luminaire Lumens: 2436.1 lumens
Efficiency: N/A
Efficacy: 78.1 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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: P1060641

CATALOG NUMBER: S124RDR-H1020D835-X4F0-XX-UDD-WVL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1060641

CATALOG NUMBER: S124RDR-H1020D835-X4F0-XX-UDD-WVL-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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89				87	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77				75	
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67				65	
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59				57	
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52				50	
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47				45	
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42				40	
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38				37	
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35				33	
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32				31	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11432	11432	11432
5°	11101	11233	11415
10°	10541	10849	11342
15°	9909	10390	11208
20°	9216	9841	10907
25°	8450	9188	10549
30°	7617	8494	10152
35°	6744	7769	9770
40°	5732	7013	9377
45°	4693	6195	9014
50°	4109	5320	8484
55°	3774	4586	7849
60°	3501	4128	6920
65°	3280	3877	5793
70°	3077	3550	4348
75°	2891	3244	3167
80°	2678	2970	2678
85°	2440	2905	2322

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9014 cd/sqm



TEST NUMBER: P1060641

CATALOG NUMBER: S124RDR-H1020D835-X4F0-XX-UDD-WVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.7	5.0
10°-20°	330.1	13.6
20°-30°	451.3	18.5
30°-40°	474.3	19.5
40°-50°	411.6	16.9
50°-60°	310.4	12.7
60°-70°	201.2	8.3
70°-80°	103.3	4.2
80°-90°	31.3	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°	904.1	37.1
0°-40°	1378.3	56.6
0°-60°	2100.3	86.2
0°-90°	2436.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2436.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1284	1302	1300	1310	1321	120
15°	1112	1138	1166	1218	1257	312
25°	889	921	967	1041	1110	408
35°	642	677	739	838	929	399
45°	385	422	509	636	740	303
55°	251	258	306	434	523	226
65°	161	164	190	230	284	160
75°	87	98	98	99	95	92
85°	25	30	29	28	24	28
90°	0	0	0	0	0	



TEST NUMBER: P1060641

CATALOG NUMBER: S124RDR-H1020D835-X4F0-XX-UDD-WVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1327.6	1327.6	1327.6	1327.6	1327.6
2.5°	1312.4	1328.8	1317.1	1319.4	1320.6
5°	1284.2	1301.8	1299.5	1310.0	1320.6
7.5°	1247.8	1268.9	1273.6	1294.8	1312.4
10°	1205.5	1229.0	1240.7	1274.8	1297.1
12.5°	1160.8	1184.3	1205.5	1248.9	1280.7
15°	1111.5	1138.5	1165.5	1218.4	1257.2
17.5°	1059.8	1088.0	1122.0	1179.6	1225.4
20°	1005.7	1033.9	1073.9	1136.1	1190.2
22.5°	948.2	979.9	1022.2	1089.1	1152.6
25°	889.4	921.1	967.0	1041.0	1110.3
27.5°	828.3	861.2	910.6	992.8	1066.8
30°	766.0	801.3	854.2	941.1	1021.0
32.5°	702.6	740.2	796.6	889.4	976.3
35°	641.5	676.7	739.0	837.7	929.4
37.5°	578.1	613.3	680.3	787.2	882.4
40°	509.9	548.7	623.9	734.3	834.2
42.5°	446.5	485.2	566.3	683.8	788.4
45°	385.4	421.8	508.7	635.6	740.2
47.5°	338.4	364.2	451.2	588.6	688.5
50°	306.7	318.4	397.1	536.9	633.3
52.5°	278.5	287.9	347.8	485.2	579.2
55°	251.4	258.5	305.5	433.5	522.8
57.5°	227.9	231.5	267.9	381.8	461.7
60°	203.3	208.0	239.7	329.0	401.8
62.5°	183.3	185.6	215.0	278.5	341.9
65°	161.0	164.5	190.3	230.3	284.3
67.5°	141.0	146.9	164.5	188.0	224.4
70°	122.2	130.4	141.0	152.7	172.7
72.5°	104.6	114.0	119.8	124.5	121.0
75°	86.9	97.5	97.5	98.7	95.2
77.5°	70.5	79.9	78.7	77.5	72.8
80°	54.0	62.3	59.9	58.7	54.0
82.5°	39.9	45.8	43.5	42.3	36.4
85°	24.7	30.5	29.4	28.2	23.5
87.5°	11.7	17.6	16.4	15.3	10.6
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1060641
 CATALOG NUMBER: S124RDR-H1020D835-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	14.97	16.46	15.33	16.77	17.08	18.71	20.19	19.07	20.51	20.82
	3H	16.64	17.97	17.01	18.30	18.66	19.83	21.16	20.21	21.49	21.85
	4H	17.30	18.55	17.70	18.90	19.28	20.13	21.38	20.53	21.73	22.10
	6H	17.81	18.96	18.22	19.33	19.72	20.33	21.48	20.74	21.85	22.24
	8H	17.98	19.08	18.41	19.47	19.87	20.38	21.48	20.81	21.87	22.27
	12H	18.10	19.15	18.54	19.54	19.97	20.41	21.46	20.85	21.85	22.28
4H	2H	15.76	17.01	16.16	17.36	17.74	18.87	20.12	19.27	20.47	20.85
	3H	17.63	18.67	18.04	19.07	19.47	20.20	21.24	20.61	21.64	22.04
	4H	18.44	19.37	18.87	19.78	20.22	20.62	21.55	21.05	21.97	22.41
	6H	19.08	19.89	19.54	20.33	20.79	20.94	21.75	21.40	22.19	22.65
	8H	19.30	20.06	19.77	20.50	20.97	21.03	21.79	21.50	22.24	22.70
	12H	19.47	20.14	19.95	20.62	21.09	21.11	21.78	21.59	22.26	22.73
8H	4H	18.78	19.54	19.25	19.99	20.45	20.75	21.51	21.22	21.95	22.42
	6H	19.57	20.20	20.07	20.69	21.17	21.17	21.80	21.67	22.29	22.77
	8H	19.89	20.45	20.41	20.96	21.45	21.33	21.89	21.84	22.40	22.89
	12H	20.16	20.65	20.67	21.14	21.71	21.47	21.96	21.98	22.45	23.02
12H	4H	18.81	19.49	19.30	19.97	20.44	20.76	21.43	21.24	21.91	22.38
	6H	19.64	20.20	20.15	20.71	21.20	21.19	21.75	21.71	22.26	22.75
	8H	20.02	20.52	20.53	21.01	21.57	21.40	21.90	21.91	22.39	22.96