

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: P1060248

Luminaire Tested: S124RDRP-S1020D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060248
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S1020D850-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

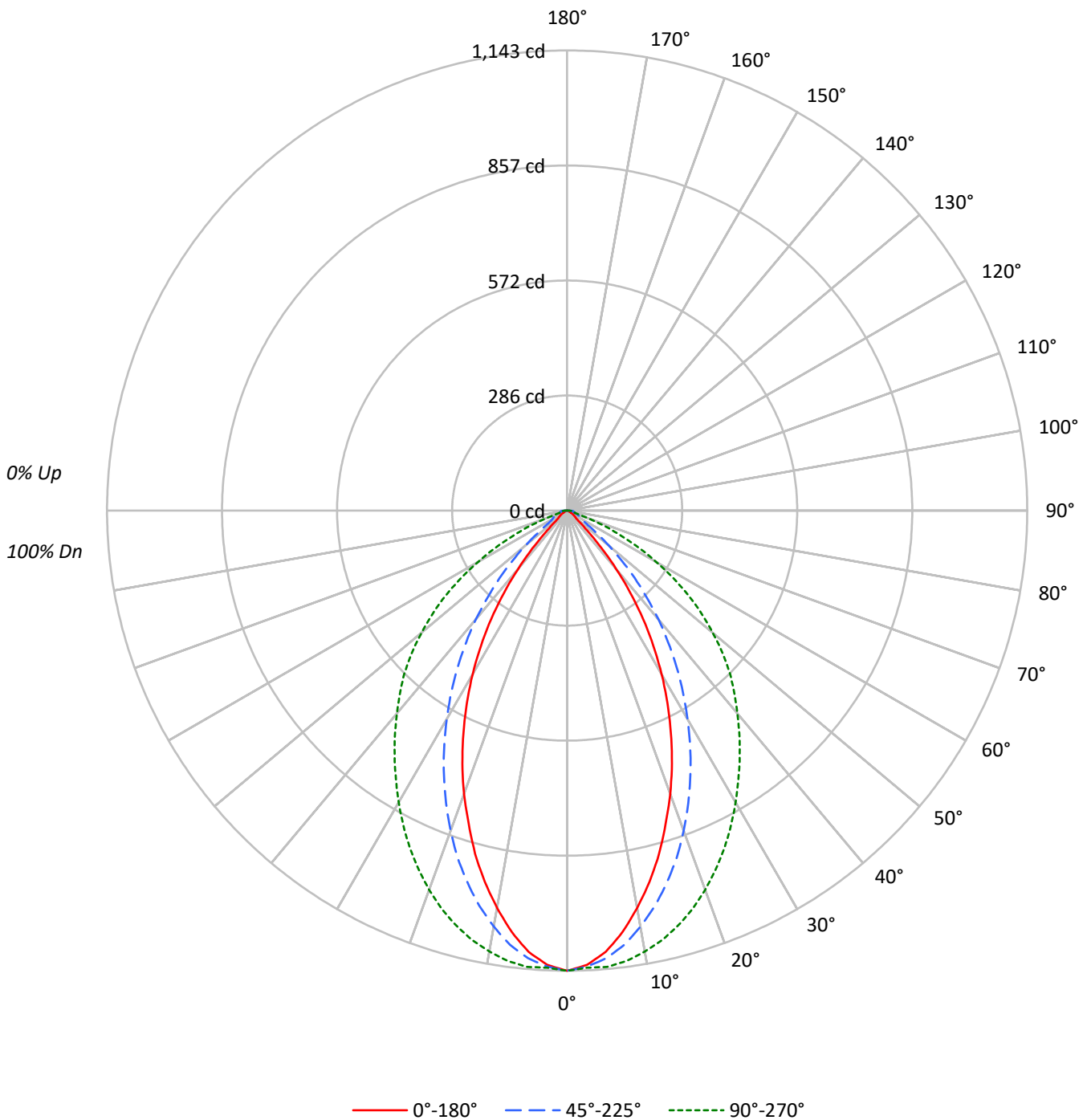
Lumens per Lamp: N/A
Luminaire Lumens: 1440.7 lumens
Efficiency: N/A
Efficacy: 41.2 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 35
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9843	9843	9843
5°	9509	9648	9834
10°	8763	9173	9725
15°	7870	8528	9509
20°	6860	7757	9184
25°	5787	6884	8783
30°	4669	5950	8325
35°	3455	4979	7856
40°	2141	3966	7390
45°	850	2892	6960
50°	378	1815	6326
55°	302	947	5538
60°	208	716	4412
65°	137	711	3034
70°	136	642	1417
75°	180	625	625
80°	268	734	734
85°	534	1462	1057

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6960 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.8	7.3
10°-20°	270.6	18.8
20°-30°	341.6	23.7
30°-40°	313.4	21.8
40°-50°	213.4	14.8
50°-60°	116.3	8.1
60°-70°	50.3	3.5
70°-80°	18.4	1.3
80°-90°	11.8	0.8
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°	717.0	49.8
0°-40°	1030.4	71.5
0°-60°	1360.1	94.4
0°-90°	1440.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1440.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1100	1115	1116	1128	1138	102
15°	883	914	957	1025	1067	246
25°	609	652	724	840	924	278
35°	329	377	474	624	747	203
45°	70	117	238	421	572	65
55°	20	22	63	232	369	18
65°	7	9	35	72	149	8
75°	5	17	19	19	19	6
85°	5	12	15	15	11	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1143.0	1143.0	1143.0	1143.0	1143.0
2.5°	1129.6	1143.0	1133.6	1136.3	1136.3
5°	1100.1	1114.9	1116.2	1128.3	1137.7
7.5°	1055.8	1077.3	1088.0	1112.2	1128.3
10°	1002.2	1027.7	1049.1	1090.7	1112.2
12.5°	944.5	974.0	1006.2	1061.2	1092.1
15°	882.8	913.6	956.6	1025.0	1066.6
17.5°	814.3	851.9	904.2	986.1	1037.1
20°	748.6	786.2	846.5	939.1	1002.2
22.5°	680.2	719.1	786.2	889.5	964.6
25°	609.1	652.0	724.5	839.8	924.4
27.5°	539.3	584.9	661.4	787.5	881.4
30°	469.6	515.2	598.4	733.9	837.2
32.5°	398.5	445.4	535.3	677.5	791.5
35°	328.7	377.0	473.6	623.8	747.3
37.5°	257.6	308.6	411.9	571.5	703.0
40°	190.5	241.5	352.8	519.2	657.4
42.5°	127.5	178.4	292.5	468.2	614.5
45°	69.8	116.7	237.5	421.3	571.5
47.5°	37.6	64.4	183.8	375.6	523.2
50°	28.2	34.9	135.5	327.3	472.2
52.5°	24.1	26.8	93.9	276.4	421.3
55°	20.1	21.5	63.1	232.1	368.9
57.5°	16.1	17.4	47.0	187.8	312.6
60°	12.1	14.8	41.6	144.9	256.2
62.5°	9.4	12.1	38.9	106.0	202.6
65°	6.7	9.4	34.9	72.4	148.9
67.5°	6.7	10.7	29.5	47.0	100.6
70°	5.4	14.8	25.5	30.9	56.3
72.5°	5.4	16.1	21.5	21.5	21.5
75°	5.4	17.4	18.8	18.8	18.8
77.5°	5.4	16.1	17.4	16.1	16.1
80°	5.4	14.8	14.8	14.8	14.8
82.5°	5.4	13.4	14.8	14.8	12.1
85°	5.4	12.1	14.8	14.8	10.7
87.5°	4.0	12.1	13.4	13.4	8.0
90°	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	0.00	0.24	0.00	0.56	0.87	16.35	17.63	16.72	17.94	18.26
	3H	0.40	1.53	0.78	1.87	2.23	16.73	17.86	17.11	18.19	18.56
	4H	1.63	2.68	2.03	3.03	3.41	16.71	17.76	17.11	18.11	18.49
	6H	2.82	3.78	3.23	4.15	4.55	16.70	17.66	17.11	18.03	18.43
	8H	3.41	4.33	3.84	4.72	5.12	16.70	17.61	17.13	18.00	18.41
	12H	4.09	4.96	4.52	5.34	5.77	16.71	17.58	17.14	17.97	18.40
4H	2H	2.60	3.65	3.00	4.00	4.38	16.16	17.22	16.57	17.57	17.95
	3H	4.18	5.04	4.60	5.45	5.85	16.58	17.44	17.00	17.85	18.25
	4H	5.47	6.24	5.91	6.66	7.11	16.58	17.35	17.02	17.77	18.21
	6H	6.61	7.27	7.07	7.72	8.19	16.62	17.28	17.09	17.73	18.20
	8H	7.12	7.74	7.59	8.19	8.66	16.65	17.27	17.12	17.72	18.19
	12H	7.67	8.22	8.16	8.70	9.18	16.72	17.26	17.20	17.74	18.22
8H	4H	6.56	7.18	7.03	7.63	8.10	16.49	17.11	16.96	17.56	18.03
	6H	8.11	8.61	8.61	9.11	9.59	16.57	17.08	17.07	17.57	18.06
	8H	8.92	9.37	9.44	9.89	10.38	16.66	17.11	17.18	17.63	18.12
	12H	9.75	10.15	10.27	10.65	11.22	16.83	17.23	17.34	17.72	18.30
12H	4H	6.75	7.30	7.24	7.78	8.25	16.46	17.00	16.94	17.49	17.96
	6H	8.47	8.92	8.99	9.44	9.93	16.54	17.00	17.07	17.52	18.01
	8H	9.48	9.88	9.99	10.38	10.95	16.68	17.08	17.20	17.58	18.15