

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: P1060635

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060635
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: S124RDR-H1020D835-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

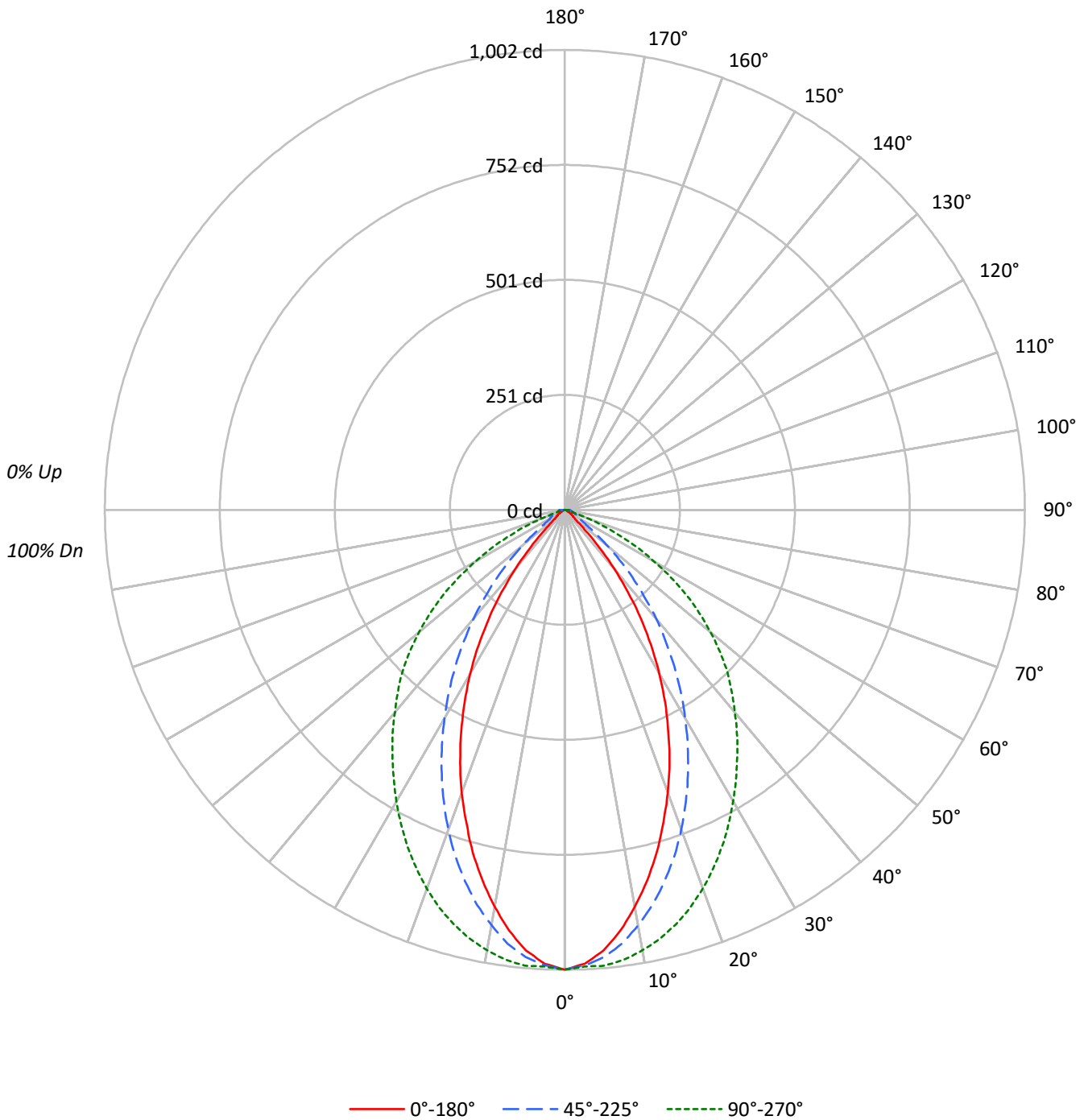
Lumens per Lamp: N/A
Luminaire Lumens: 1262.4 lumens
Efficiency: N/A
Efficacy: 40.5 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	8625	8625	8625
5°	8333	8455	8617
10°	7679	8038	8522
15°	6897	7472	8332
20°	6011	6798	8048
25°	5071	6031	7696
30°	4092	5213	7294
35°	3028	4363	6883
40°	1876	3476	6476
45°	744	2534	6099
50°	331	1590	5543
55°	264	830	4854
60°	183	627	3866
65°	120	623	2659
70°	118	561	1244
75°	156	549	549
80°	233	640	640
85°	464	1275	929

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6099 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.9	7.3
10°-20°	237.1	18.8
20°-30°	299.3	23.7
30°-40°	274.6	21.8
40°-50°	187.0	14.8
50°-60°	101.9	8.1
60°-70°	44.1	3.5
70°-80°	16.1	1.3
80°-90°	10.4	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°	628.3	49.8
0°-40°	903.0	71.5
0°-60°	1191.9	94.4
0°-90°	1262.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1262.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1002	1002	1002	1002	1002	
5°	964	977	978	989	997	89
15°	774	801	838	898	935	215
25°	534	571	635	736	810	244
35°	288	330	415	547	655	178
45°	61	102	208	369	501	57
55°	18	19	55	203	323	16
65°	6	8	31	64	130	7
75°	5	15	16	16	16	5
85°	5	11	13	13	9	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1001.6	1001.6	1001.6	1001.6	1001.6
2.5°	989.9	1001.6	993.4	995.8	995.8
5°	964.0	977.0	978.1	988.7	996.9
7.5°	925.2	944.0	953.4	974.6	988.7
10°	878.2	900.5	919.3	955.8	974.6
12.5°	827.7	853.5	881.7	929.9	957.0
15°	773.6	800.6	838.2	898.2	934.6
17.5°	713.6	746.5	792.4	864.1	908.8
20°	656.0	688.9	741.8	822.9	878.2
22.5°	596.0	630.1	688.9	779.4	845.3
25°	533.7	571.4	634.8	736.0	810.0
27.5°	472.6	512.6	579.6	690.1	772.4
30°	411.5	451.4	524.3	643.1	733.6
32.5°	349.2	390.3	469.1	593.7	693.6
35°	288.0	330.4	415.0	546.7	654.8
37.5°	225.7	270.4	360.9	500.8	616.0
40°	166.9	211.6	309.2	455.0	576.1
42.5°	111.7	156.4	256.3	410.3	538.4
45°	61.1	102.3	208.1	369.2	500.8
47.5°	32.9	56.4	161.1	329.2	458.5
50°	24.7	30.6	118.7	286.9	413.8
52.5°	21.2	23.5	82.3	242.2	369.2
55°	17.6	18.8	55.3	203.4	323.3
57.5°	14.1	15.3	41.1	164.6	273.9
60°	10.6	12.9	36.4	127.0	224.5
62.5°	8.2	10.6	34.1	92.9	177.5
65°	5.9	8.2	30.6	63.5	130.5
67.5°	5.9	9.4	25.9	41.1	88.2
70°	4.7	12.9	22.3	27.0	49.4
72.5°	4.7	14.1	18.8	18.8	18.8
75°	4.7	15.3	16.5	16.5	16.5
77.5°	4.7	14.1	15.3	14.1	14.1
80°	4.7	12.9	12.9	12.9	12.9
82.5°	4.7	11.8	12.9	12.9	10.6
85°	4.7	10.6	12.9	12.9	9.4
87.5°	3.5	10.6	11.8	11.8	7.1
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	0.00	0.00	0.11	0.43	15.90	17.17	16.26	17.49	17.80
	3H	0.00	1.08	0.33	1.41	1.78	16.27	17.40	16.65	17.73	18.10
	4H	1.17	2.22	1.58	2.58	2.96	16.25	17.30	16.65	17.65	18.04
	6H	2.35	3.32	2.77	3.69	4.08	16.24	17.20	16.65	17.57	17.97
	8H	2.94	3.86	3.37	4.25	4.65	16.24	17.15	16.67	17.54	17.95
	12H	3.61	4.49	4.05	4.87	5.30	16.25	17.12	16.68	17.51	17.94
4H	2H	2.15	3.20	2.55	3.55	3.93	15.71	16.76	16.11	17.11	17.49
	3H	3.72	4.58	4.14	4.99	5.39	16.13	16.98	16.54	17.39	17.79
	4H	5.02	5.79	5.46	6.21	6.65	16.12	16.89	16.56	17.31	17.76
	6H	6.15	6.81	6.61	7.25	7.72	16.16	16.83	16.63	17.27	17.74
	8H	6.66	7.27	7.13	7.72	8.19	16.19	16.81	16.66	17.26	17.73
	12H	7.21	7.75	7.69	8.24	8.71	16.26	16.80	16.74	17.29	17.76
8H	4H	6.11	6.72	6.58	7.17	7.64	16.03	16.65	16.50	17.10	17.57
	6H	7.64	8.15	8.15	8.65	9.13	16.11	16.62	16.62	17.11	17.60
	8H	8.45	8.91	8.98	9.43	9.92	16.19	16.65	16.72	17.17	17.66
	12H	9.29	9.69	9.80	10.19	10.76	16.36	16.77	16.88	17.26	17.83
12H	4H	6.29	6.84	6.78	7.32	7.80	16.00	16.54	16.48	17.03	17.50
	6H	8.00	8.45	8.52	8.97	9.46	16.08	16.54	16.61	17.06	17.55
	8H	9.01	9.41	9.53	9.91	10.48	16.22	16.62	16.74	17.12	17.69