

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: P1060680

Luminaire Tested: S124RDR-H1020D935-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060680
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-H1020D935-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, 90 CRI LEDS
Ballast/Driver: -

Summary

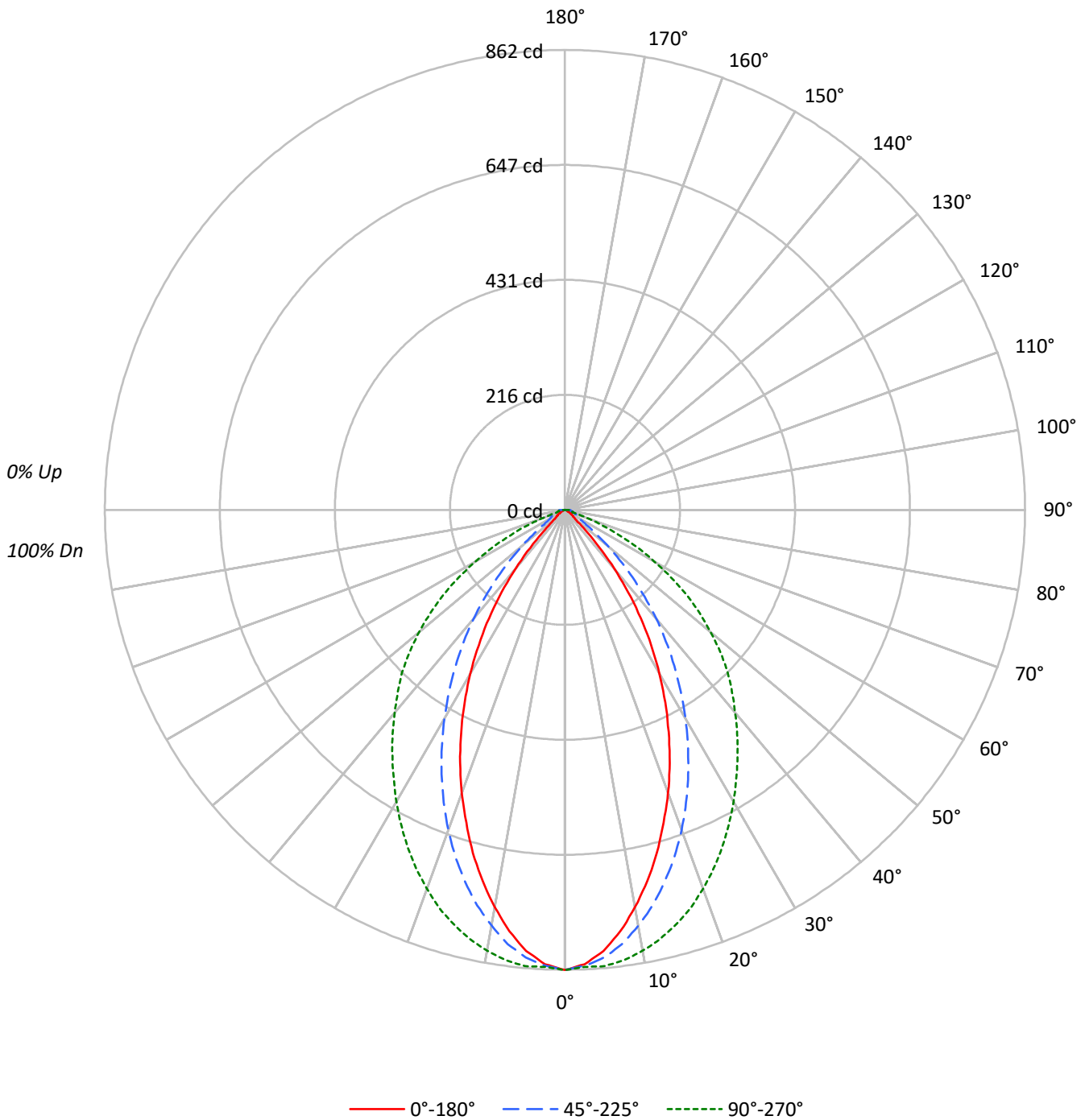
Lumens per Lamp: N/A
Luminaire Lumens: 1086.9 lumens
Efficiency: N/A
Efficacy: 34.8 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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°	7426	7426	7426
5°	7175	7280	7420
10°	6611	6922	7337
15°	5937	6434	7174
20°	5176	5853	6929
25°	4366	5193	6626
30°	3523	4489	6280
35°	2607	3756	5927
40°	1615	2992	5576
45°	641	2182	5251
50°	285	1369	4773
55°	228	715	4180
60°	157	541	3329
65°	104	536	2290
70°	101	483	1070
75°	133	472	472
80°	198	550	550
85°	395	1097	800

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5251 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	7.3
10°-20°	204.2	18.8
20°-30°	257.7	23.7
30°-40°	236.5	21.8
40°-50°	161.0	14.8
50°-60°	87.7	8.1
60°-70°	38.0	3.5
70°-80°	13.8	1.3
80°-90°	8.9	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°	541.0	49.8
0°-40°	777.5	71.5
0°-60°	1026.2	94.4
0°-90°	1086.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1086.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	830	841	842	851	858	77
15°	666	689	722	773	805	185
25°	460	492	547	634	697	210
35°	248	284	357	471	564	153
45°	53	88	179	318	431	49
55°	15	16	48	175	278	14
65°	5	7	26	55	112	6
75°	4	13	14	14	14	4
85°	4	9	11	11	8	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	862.4	862.4	862.4	862.4	862.4
2.5°	852.3	862.4	855.3	857.4	857.4
5°	830.0	841.2	842.2	851.3	858.4
7.5°	796.6	812.8	820.9	839.1	851.3
10°	756.1	775.4	791.6	822.9	839.1
12.5°	712.6	734.9	759.2	800.7	823.9
15°	666.0	689.3	721.7	773.3	804.7
17.5°	614.4	642.8	682.2	744.0	782.4
20°	564.8	593.2	638.7	708.6	756.1
22.5°	513.2	542.6	593.2	671.1	727.8
25°	459.5	491.9	546.6	633.7	697.4
27.5°	406.9	441.3	499.0	594.2	665.0
30°	354.3	388.7	451.5	553.7	631.6
32.5°	300.6	336.1	403.9	511.2	597.2
35°	248.0	284.4	357.3	470.7	563.8
37.5°	194.3	232.8	310.8	431.2	530.4
40°	143.7	182.2	266.2	391.7	496.0
42.5°	96.2	134.6	220.7	353.3	463.6
45°	52.6	88.1	179.2	317.8	431.2
47.5°	28.3	48.6	138.7	283.4	394.8
50°	21.3	26.3	102.2	247.0	356.3
52.5°	18.2	20.2	70.9	208.5	317.8
55°	15.2	16.2	47.6	175.1	278.4
57.5°	12.1	13.2	35.4	141.7	235.8
60°	9.1	11.1	31.4	109.3	193.3
62.5°	7.1	9.1	29.4	80.0	152.8
65°	5.1	7.1	26.3	54.7	112.4
67.5°	5.1	8.1	22.3	35.4	75.9
70°	4.0	11.1	19.2	23.3	42.5
72.5°	4.0	12.1	16.2	16.2	16.2
75°	4.0	13.2	14.2	14.2	14.2
77.5°	4.0	12.1	13.2	12.1	12.1
80°	4.0	11.1	11.1	11.1	11.1
82.5°	4.0	10.1	11.1	11.1	9.1
85°	4.0	9.1	11.1	11.1	8.1
87.5°	3.0	9.1	10.1	10.1	6.1
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	0.00	0.00	15.37	16.65	15.74	16.97	17.28
	3H	0.00	0.57	0.00	0.90	1.26	15.75	16.88	16.13	17.21	17.58
	4H	0.65	1.70	1.05	2.05	2.43	15.73	16.78	16.13	17.13	17.52
	6H	1.81	2.78	2.23	3.15	3.54	15.72	16.68	16.13	17.05	17.45
	8H	2.40	3.31	2.83	3.70	4.11	15.72	16.63	16.15	17.02	17.43
	12H	3.06	3.93	3.49	4.32	4.75	15.73	16.60	16.16	16.99	17.42
4H	2H	1.62	2.67	2.02	3.02	3.41	15.18	16.24	15.59	16.59	16.97
	3H	3.20	4.06	3.61	4.46	4.87	15.60	16.46	16.02	16.87	17.27
	4H	4.50	5.26	4.93	5.68	6.13	15.60	16.37	16.04	16.79	17.23
	6H	5.61	6.28	6.08	6.72	7.19	15.64	16.30	16.11	16.75	17.22
	8H	6.12	6.74	6.59	7.18	7.66	15.67	16.29	16.14	16.74	17.21
	12H	6.66	7.21	7.15	7.69	8.17	15.73	16.28	16.22	16.76	17.24
8H	4H	5.58	6.20	6.05	6.65	7.12	15.51	16.13	15.98	16.58	17.05
	6H	7.12	7.62	7.62	8.12	8.60	15.59	16.10	16.09	16.59	17.07
	8H	7.92	8.37	8.44	8.89	9.38	15.67	16.13	16.20	16.64	17.14
	12H	8.75	9.15	9.26	9.65	10.22	15.84	16.24	16.36	16.74	17.31
12H	4H	5.77	6.32	6.26	6.80	7.28	15.48	16.02	15.96	16.51	16.98
	6H	7.47	7.92	7.99	8.44	8.93	15.56	16.02	16.09	16.53	17.03
	8H	8.48	8.88	8.99	9.38	9.95	15.70	16.10	16.22	16.60	17.17