

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: P1060684

Luminaire Tested: S124RDR-H1020D935-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060684
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D935-X4F0-XX-UDD-WVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

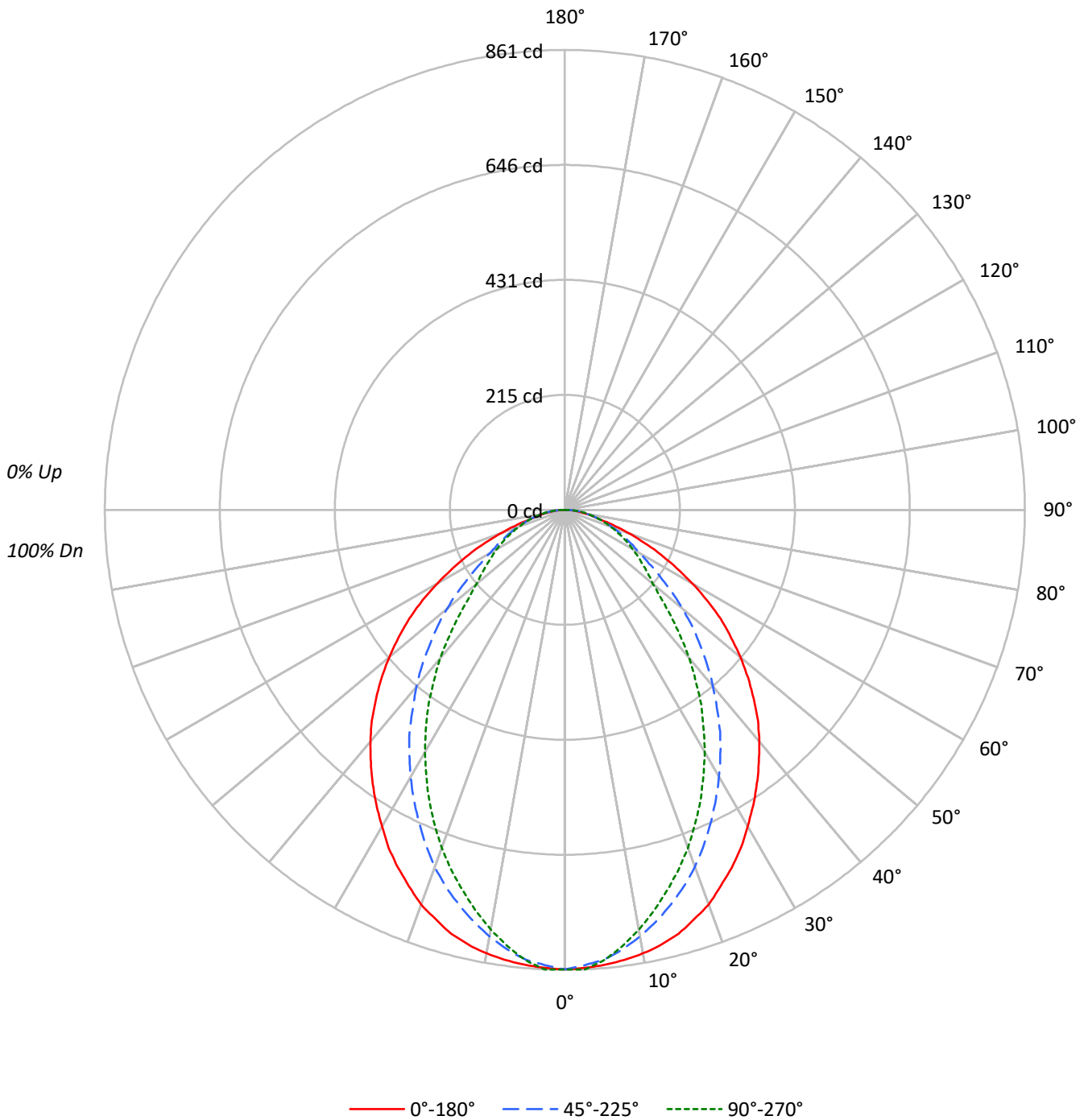
Lumens per Lamp: N/A
Luminaire Lumens: 1658.8 lumens
Efficiency: N/A
Efficacy: 53.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7408	7408	7408
5°	7392	7305	7314
10°	7372	7089	6974
15°	7327	6823	6579
20°	7207	6522	6170
25°	7021	6138	5706
30°	6805	5739	5206
35°	6589	5324	4676
40°	6364	4853	4079
45°	6082	4358	3410
50°	5742	3846	2884
55°	5342	3262	2671
60°	4736	2768	2525
65°	4036	2555	2390
70°	3157	2367	2266
75°	2153	2186	2186
80°	1855	2053	2108
85°	1601	1996	2193

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6082 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.0	4.8
10°-20°	217.4	13.1
20°-30°	301.8	18.2
30°-40°	323.5	19.5
40°-50°	286.6	17.3
50°-60°	215.9	13.0
60°-70°	139.8	8.4
70°-80°	71.8	4.3
80°-90°	22.0	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°	599.2	36.1
0°-40°	922.6	55.6
0°-60°	1425.2	85.9
0°-90°	1658.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1658.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	860	860	860	860	860	
5°	855	856	845	846	846	81
15°	822	804	765	746	738	231
25°	739	700	646	612	600	340
35°	627	570	506	461	445	392
45°	499	435	358	302	280	385
55°	356	296	217	183	178	316
65°	198	160	125	118	117	196
75°	65	68	66	66	66	77
85°	16	17	20	22	22	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	860.3	860.3	860.3	860.3	860.3
2.5°	858.3	861.3	853.2	859.3	861.3
5°	855.2	856.2	845.1	846.1	846.1
7.5°	850.2	848.1	830.0	824.9	823.9
10°	843.1	837.0	810.7	800.6	797.6
12.5°	834.0	822.9	789.5	775.4	769.3
15°	821.9	803.7	765.3	746.0	738.0
17.5°	803.7	780.4	740.0	715.7	706.6
20°	786.5	755.1	711.7	681.3	673.3
22.5°	762.2	728.9	679.3	647.0	636.9
25°	739.0	699.5	646.0	611.6	600.5
27.5°	713.7	669.2	611.6	575.2	561.1
30°	684.4	636.9	577.2	538.8	523.6
32.5°	656.1	605.5	541.8	499.4	483.2
35°	626.8	570.1	506.5	461.0	444.8
37.5°	596.4	536.8	467.0	422.6	401.3
40°	566.1	503.4	431.7	381.1	362.9
42.5°	534.8	469.1	395.3	342.7	319.4
45°	499.4	434.7	357.9	302.3	280.0
47.5°	465.0	401.3	323.5	262.8	242.6
50°	428.6	365.9	287.1	228.5	215.3
52.5°	392.2	329.6	251.7	202.2	196.1
55°	355.8	296.2	217.3	183.0	177.9
57.5°	315.4	261.8	187.0	165.8	161.7
60°	275.0	224.4	160.7	149.6	146.6
62.5°	235.5	192.1	142.5	133.4	131.4
65°	198.1	159.7	125.4	118.3	117.3
67.5°	161.7	131.4	109.2	105.1	103.1
70°	125.4	105.1	94.0	92.0	90.0
72.5°	93.0	84.9	79.9	78.9	77.8
75°	64.7	67.7	65.7	65.7	65.7
77.5°	51.6	52.6	53.6	54.6	53.6
80°	37.4	40.4	41.4	43.5	42.5
82.5°	26.3	28.3	31.3	32.3	33.4
85°	16.2	17.2	20.2	22.2	22.2
87.5°	7.1	8.1	10.1	12.1	13.1
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	17.40	18.89	17.76	19.21	19.52	13.96	15.46	14.33	15.77	16.09
	3H	18.60	19.94	18.98	20.27	20.63	15.66	17.00	16.03	17.33	17.69
	4H	18.91	20.17	19.31	20.52	20.90	16.33	17.59	16.73	17.94	18.32
	6H	19.11	20.27	19.52	20.64	21.03	16.88	18.05	17.30	18.41	18.81
	8H	19.17	20.28	19.60	20.67	21.07	17.10	18.21	17.53	18.60	19.00
	12H	19.20	20.26	19.63	20.64	21.07	17.27	18.33	17.71	18.72	19.15
4H	2H	17.54	18.80	17.94	19.15	19.53	14.62	15.88	15.02	16.23	16.61
	3H	18.94	19.99	19.35	20.39	20.79	16.53	17.58	16.94	17.98	18.38
	4H	19.37	20.31	19.80	20.72	21.16	17.33	18.27	17.77	18.69	19.13
	6H	19.69	20.51	20.15	20.95	21.41	18.02	18.84	18.48	19.28	19.74
	8H	19.79	20.55	20.25	21.00	21.47	18.30	19.06	18.76	19.50	19.97
	12H	19.86	20.54	20.34	21.02	21.49	18.53	19.21	19.01	19.69	20.16
8H	4H	19.49	20.26	19.96	20.70	21.17	17.65	18.41	18.11	18.86	19.33
	6H	19.92	20.55	20.41	21.04	21.52	18.48	19.11	18.98	19.60	20.08
	8H	20.07	20.64	20.59	21.15	21.64	18.84	19.41	19.36	19.92	20.41
	12H	20.20	20.70	20.71	21.20	21.76	19.18	19.68	19.69	20.17	20.74
12H	4H	19.50	20.18	19.98	20.66	21.13	17.68	18.36	18.16	18.84	19.31
	6H	19.94	20.51	20.45	21.02	21.51	18.54	19.11	19.05	19.62	20.11
	8H	20.15	20.65	20.66	21.14	21.71	18.97	19.47	19.48	19.96	20.53