

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: P1060645

Luminaire Tested: S124RDR-H1020D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060645
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D840-X4F0-XX-UDD-SVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

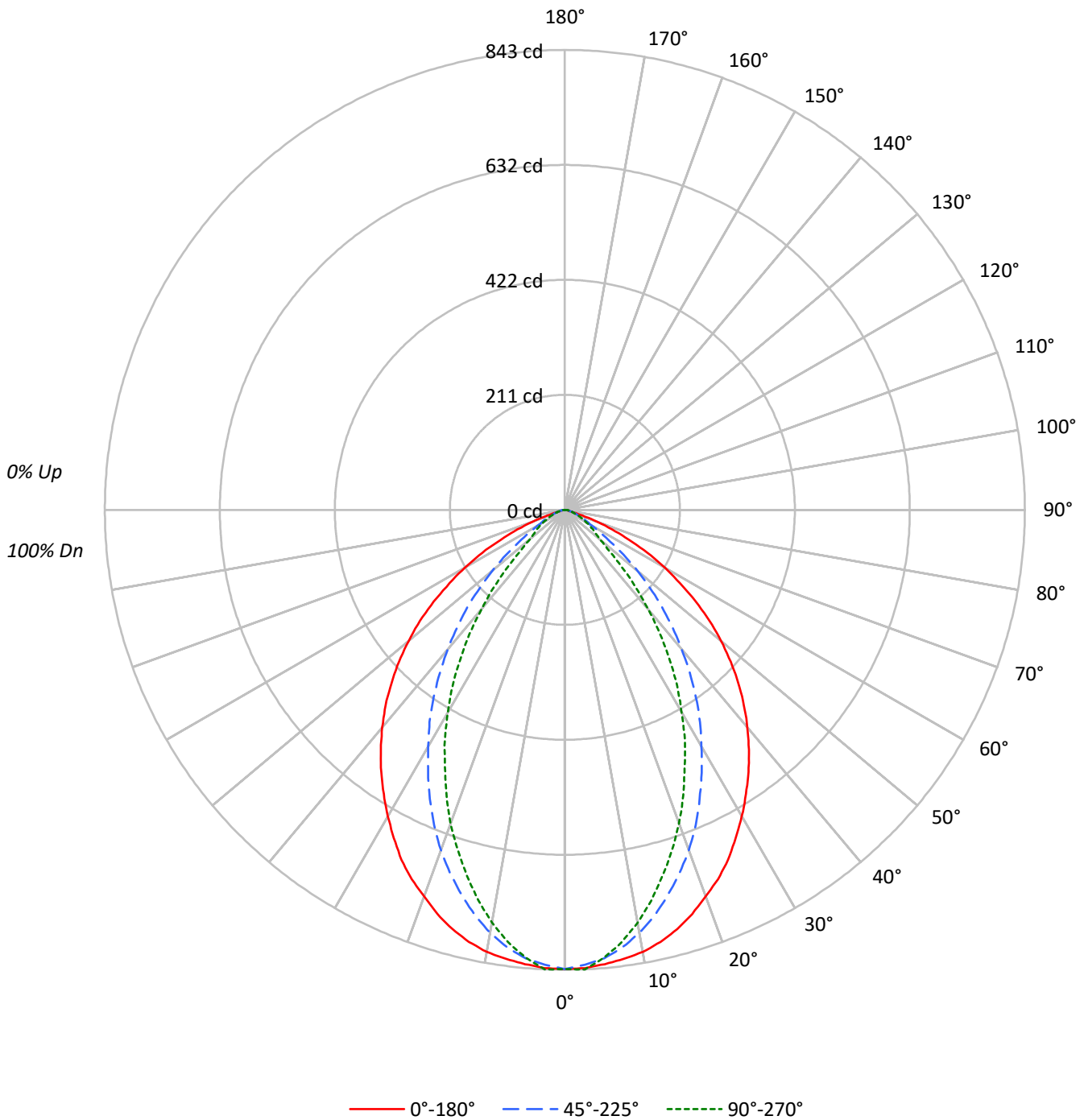
Lumens per Lamp: N/A
Luminaire Lumens: 1241.2 lumens
Efficiency: N/A
Efficacy: 39.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63
5	84	74	66	61	82	73	66	60	71	65	60	69	63	59	67	62	59	57
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	48	47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7249	7249	7249
5°	7226	7133	7123
10°	7195	6884	6718
15°	7093	6511	6183
20°	6910	6085	5606
25°	6726	5554	4934
30°	6449	4976	4256
35°	6170	4399	3515
40°	5851	3746	2665
45°	5473	3062	1790
50°	5004	2319	1112
55°	4397	1531	943
60°	3636	939	777
65°	2633	725	628
70°	1433	536	478
75°	316	396	433
80°	233	293	352
85°	237	237	356

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5473 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	6.3
10°-20°	207.2	16.7
20°-30°	274.4	22.1
30°-40°	272.4	21.9
40°-50°	209.6	16.9
50°-60°	124.9	10.1
60°-70°	56.8	4.6
70°-80°	14.7	1.2
80°-90°	3.3	0.3
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°	559.6	45.1
0°-40°	831.9	67.0
0°-60°	1166.4	94.0
0°-90°	1241.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1241.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	842	842	842	842	842	
5°	836	837	825	825	824	79
15°	796	775	730	706	694	224
25°	708	657	584	536	519	325
35°	587	513	418	354	334	366
45°	449	362	251	176	147	346
55°	293	209	102	64	63	261
65°	129	77	36	31	31	130
75°	10	12	12	13	13	20
85°	2	2	2	4	4	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	841.8	841.8	841.8	841.8	841.8
2.5°	840.6	841.8	834.7	840.6	843.0
5°	835.9	837.1	825.2	825.2	824.0
7.5°	830.0	827.6	808.6	801.5	799.1
10°	822.9	814.6	787.3	773.1	768.3
12.5°	811.0	798.0	761.2	741.1	732.8
15°	795.6	775.4	730.4	705.5	693.6
17.5°	776.6	751.7	698.4	666.4	653.3
20°	754.1	720.9	664.0	623.7	611.8
22.5°	732.8	691.3	626.0	579.8	566.8
25°	707.9	656.9	584.5	535.9	519.3
27.5°	678.2	623.7	543.0	493.2	476.6
30°	648.6	588.1	500.4	448.2	428.0
32.5°	617.7	551.3	461.2	401.9	383.0
35°	586.9	513.4	418.5	354.5	334.4
37.5°	553.7	475.5	375.9	309.5	286.9
40°	520.5	438.7	333.2	265.6	237.1
42.5°	486.1	400.8	291.7	220.5	192.1
45°	449.4	361.6	251.4	175.5	147.0
47.5°	412.6	324.9	211.1	131.6	105.5
50°	373.5	285.7	173.1	96.0	83.0
52.5°	334.4	247.8	135.2	74.7	71.1
55°	292.9	208.7	102.0	64.0	62.8
57.5°	250.2	173.1	73.5	55.7	53.4
60°	211.1	139.9	54.5	47.4	45.1
62.5°	170.7	105.5	45.1	39.1	36.8
65°	129.2	77.1	35.6	30.8	30.8
67.5°	93.7	52.2	28.5	24.9	23.7
70°	56.9	32.0	21.3	20.2	19.0
72.5°	28.5	19.0	16.6	15.4	15.4
75°	9.5	11.9	11.9	13.0	13.0
77.5°	7.1	8.3	8.3	9.5	9.5
80°	4.7	5.9	5.9	7.1	7.1
82.5°	3.6	3.6	4.7	4.7	5.9
85°	2.4	2.4	2.4	3.6	3.6
87.5°	1.2	1.2	1.2	2.4	2.4
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	16.00	17.34	16.37	17.65	17.96	7.55	8.88	7.91	9.20	9.51
	3H	16.51	17.69	16.89	18.02	18.39	8.37	9.55	8.75	9.88	10.24
	4H	16.48	17.57	16.88	17.93	18.31	8.65	9.75	9.05	10.10	10.48
	6H	16.41	17.42	16.83	17.79	18.18	8.82	9.83	9.23	10.20	10.59
	8H	16.37	17.33	16.80	17.72	18.12	8.88	9.84	9.31	10.23	10.63
	12H	16.34	17.25	16.77	17.63	18.06	8.93	9.84	9.36	10.22	10.65
4H	2H	15.84	16.94	16.25	17.29	17.68	7.99	9.09	8.39	9.44	9.82
	3H	16.40	17.29	16.81	17.70	18.10	8.96	9.85	9.37	10.25	10.66
	4H	16.37	17.16	16.80	17.58	18.03	9.32	10.11	9.75	10.53	10.98
	6H	16.31	17.00	16.78	17.45	17.91	9.57	10.26	10.03	10.70	11.17
	8H	16.27	16.91	16.74	17.35	17.82	9.66	10.30	10.13	10.74	11.21
	12H	16.23	16.79	16.72	17.28	17.75	9.73	10.30	10.22	10.78	11.26
8H	4H	16.26	16.90	16.73	17.34	17.81	9.41	10.05	9.88	10.49	10.96
	6H	16.19	16.72	16.70	17.21	17.69	9.72	10.24	10.22	10.74	11.22
	8H	16.15	16.62	16.67	17.13	17.62	9.85	10.32	10.37	10.83	11.32
	12H	16.12	16.53	16.63	17.02	17.60	9.98	10.40	10.50	10.89	11.46
12H	4H	16.21	16.78	16.70	17.26	17.74	9.38	9.95	9.87	10.43	10.90
	6H	16.14	16.61	16.66	17.12	17.62	9.70	10.17	10.22	10.68	11.17
	8H	16.11	16.53	16.63	17.02	17.59	9.87	10.28	10.38	10.77	11.35