

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: P1059433

Luminaire Tested: S123RDR-H1000D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059433
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D840-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

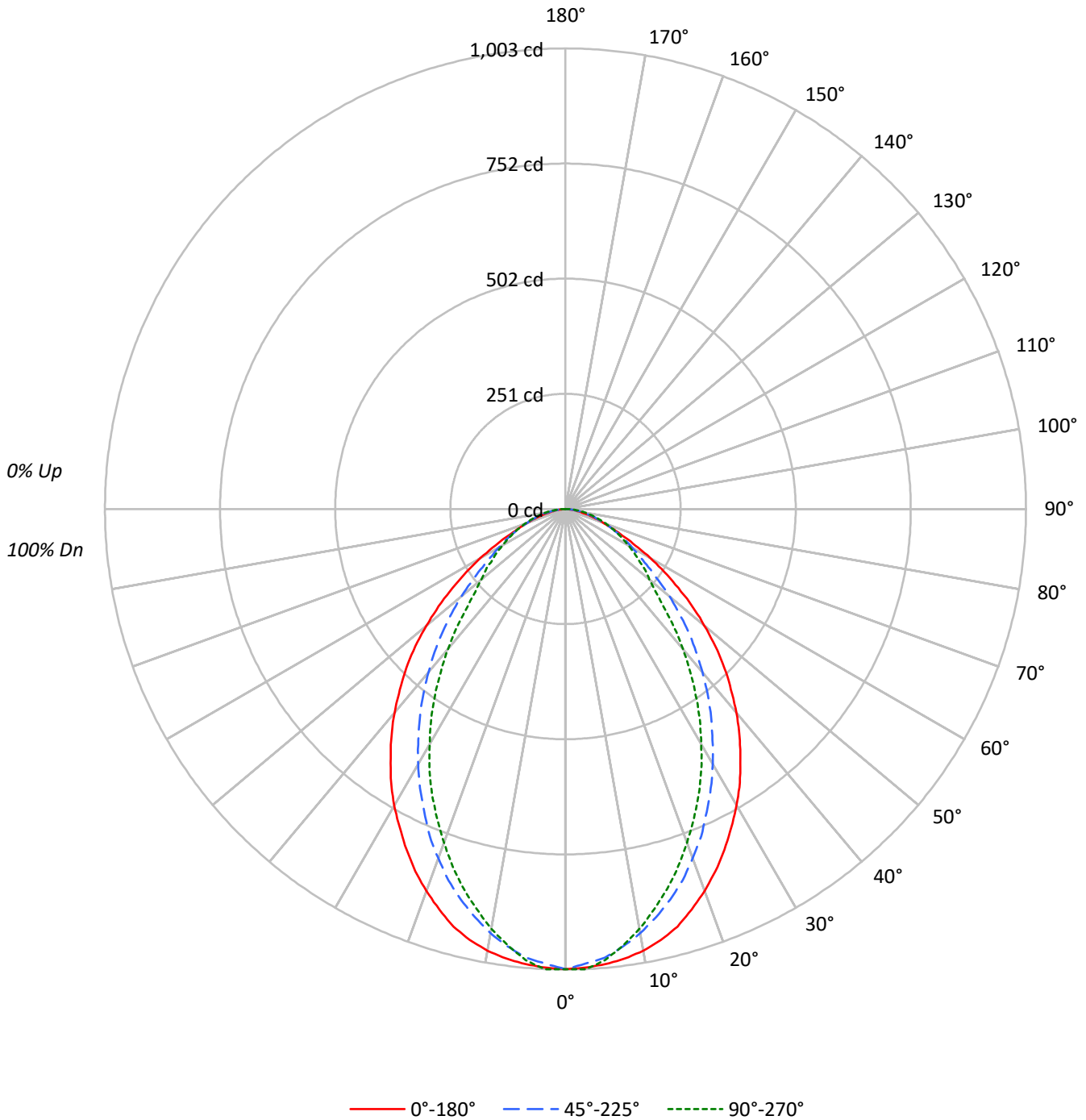
Lumens per Lamp: N/A
Luminaire Lumens: 1752.7 lumens
Efficiency: N/A
Efficacy: 56.2 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11767	11767	11767
5°	11727	11557	11628
10°	11647	11188	11073
15°	11450	10704	10411
20°	11063	10114	9663
25°	10613	9426	8896
30°	10110	8705	8019
35°	9514	7926	7096
40°	8881	7108	6112
45°	8140	6281	5020
50°	7218	5391	4357
55°	6140	4512	3994
60°	5007	3931	3706
65°	3815	3481	3448
70°	2977	3100	3227
75°	2405	2786	3003
80°	1792	2279	2773
85°	970	1455	2439

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8140 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.0	5.3
10°-20°	250.3	14.3
20°-30°	340.3	19.4
30°-40°	352.7	20.1
40°-50°	297.5	17.0
50°-60°	211.2	12.0
60°-70°	129.1	7.4
70°-80°	64.2	3.7
80°-90°	14.6	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°	683.6	39.0
0°-40°	1036.3	59.1
0°-60°	1544.9	88.1
0°-90°	1752.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1752.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1002	1002	1002	1002	1002	
5°	995	995	980	986	986	94
15°	942	924	880	865	856	264
25°	819	783	728	701	687	377
35°	664	613	553	514	495	415
45°	490	438	378	326	302	376
55°	300	269	220	201	195	269
65°	137	132	125	125	124	140
75°	53	57	61	64	66	57
85°	7	8	11	16	18	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1002.1	1002.1	1002.1	1002.1	1002.1
2.5°	999.7	1000.9	991.3	1002.1	1003.3
5°	994.9	994.9	980.5	986.5	986.5
7.5°	987.7	985.3	961.2	961.2	958.8
10°	976.8	969.6	938.3	932.3	928.7
12.5°	961.2	949.1	910.6	899.8	892.5
15°	941.9	923.8	880.5	864.8	856.4
17.5°	914.2	896.1	848.0	826.3	816.6
20°	885.3	858.8	809.4	787.7	773.3
22.5°	854.0	820.3	772.1	745.6	729.9
25°	819.1	782.9	727.5	701.0	686.6
27.5°	781.7	742.0	685.4	655.2	640.8
30°	745.6	699.8	642.0	608.3	591.4
32.5°	707.0	655.2	596.2	561.3	544.4
35°	663.7	613.1	552.9	514.3	495.0
37.5°	622.7	570.9	508.3	467.3	445.7
40°	579.4	527.6	463.7	421.6	398.7
42.5°	533.6	484.2	421.6	372.2	350.5
45°	490.2	438.4	378.2	326.4	302.3
47.5°	443.3	395.1	336.1	283.1	266.2
50°	395.1	350.5	295.1	246.9	238.5
52.5°	348.1	310.8	254.1	222.8	219.2
55°	299.9	268.6	220.4	201.1	195.1
57.5°	255.4	232.5	189.1	179.5	177.1
60°	213.2	193.9	167.4	161.4	157.8
62.5°	172.2	161.4	145.7	143.3	140.9
65°	137.3	132.5	125.3	125.3	124.1
67.5°	108.4	108.4	107.2	109.6	108.4
70°	86.7	87.9	90.3	92.7	94.0
72.5°	68.7	72.3	74.7	78.3	79.5
75°	53.0	56.6	61.4	63.8	66.2
77.5°	38.5	42.2	47.0	50.6	53.0
80°	26.5	28.9	33.7	38.5	41.0
82.5°	16.9	18.1	21.7	26.5	28.9
85°	7.2	8.4	10.8	15.7	18.1
87.5°	0.0	0.0	1.2	4.8	8.4
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	17.38	18.83	17.74	19.14	19.45	15.47	16.92	15.84	17.24	17.55
	3H	18.27	19.57	18.65	19.90	20.26	17.04	18.34	17.42	18.67	19.03
	4H	18.55	19.77	18.96	20.12	20.50	17.64	18.85	18.04	19.20	19.58
	6H	18.70	19.82	19.12	20.19	20.58	18.09	19.21	18.50	19.58	19.97
	8H	18.73	19.79	19.16	20.18	20.58	18.24	19.30	18.67	19.69	20.10
	12H	18.72	19.74	19.15	20.12	20.55	18.34	19.36	18.77	19.74	20.17
4H	2H	17.62	18.83	18.02	19.18	19.56	16.01	17.23	16.41	17.58	17.96
	3H	18.73	19.73	19.14	20.13	20.54	17.79	18.79	18.20	19.19	19.59
	4H	19.12	20.02	19.56	20.44	20.88	18.50	19.40	18.93	19.81	20.25
	6H	19.36	20.14	19.82	20.59	21.05	19.07	19.85	19.53	20.29	20.75
	8H	19.41	20.13	19.87	20.58	21.05	19.26	19.99	19.73	20.43	20.90
	12H	19.42	20.06	19.90	20.54	21.01	19.40	20.05	19.88	20.53	21.00
8H	4H	19.28	20.01	19.75	20.45	20.92	18.71	19.43	19.17	19.88	20.35
	6H	19.59	20.19	20.09	20.68	21.16	19.38	19.98	19.88	20.47	20.95
	8H	19.67	20.21	20.19	20.72	21.21	19.64	20.18	20.16	20.69	21.18
	12H	19.70	20.18	20.22	20.67	21.24	19.85	20.32	20.36	20.82	21.38
12H	4H	19.28	19.93	19.77	20.41	20.88	18.71	19.35	19.19	19.83	20.30
	6H	19.61	20.14	20.12	20.66	21.15	19.39	19.93	19.91	20.44	20.93
	8H	19.72	20.20	20.23	20.69	21.26	19.70	20.17	20.21	20.66	21.23