

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: P1059515

Luminaire Tested: S123RDR-H1165D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059515
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D840-X4F0-XX-UDD-WVL-S
Description: DEFINE 3 SILVER 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

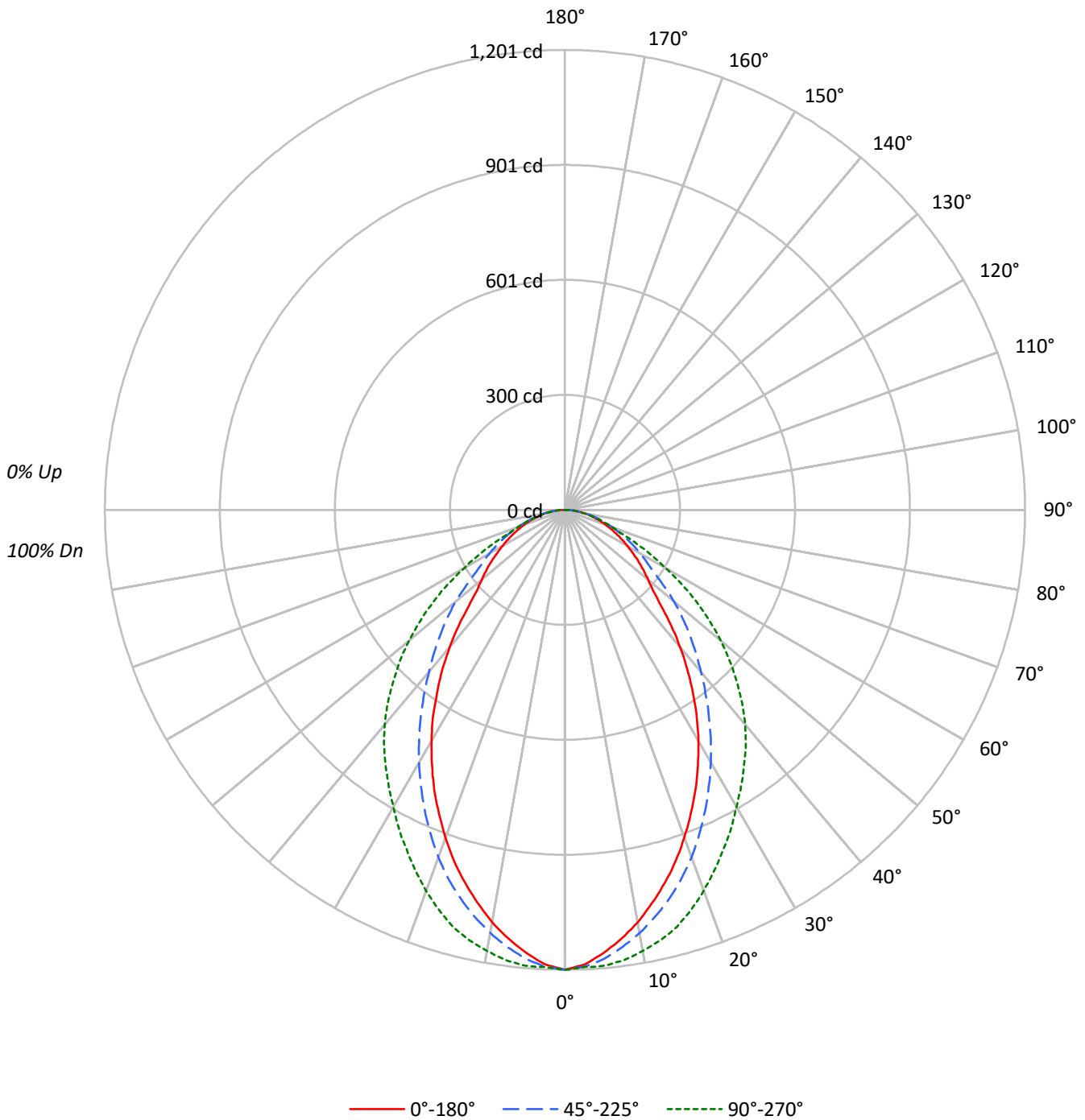
Lumens per Lamp: N/A
Luminaire Lumens: 2169.4 lumens
Efficiency: N/A
Efficacy: 59.4 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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	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	108	104	100	97	100	97	94	96	93	91	92	90	89	87				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57				
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51				
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45				
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41				
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14103	14103	14103
5°	13691	13874	14089
10°	13044	13379	13951
15°	12255	12785	13709
20°	11383	12069	13231
25°	10452	11219	12678
30°	9449	10328	12141
35°	8336	9385	11686
40°	7165	8460	11222
45°	5892	7622	10522
50°	5170	6790	9697
55°	4784	5794	8590
60°	4399	5324	7109
65°	4107	4890	5593
70°	3866	4446	4446
75°	3643	4088	3834
80°	3428	3712	3239
85°	3220	3611	2466

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10522 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.1	5.1
10°-20°	297.7	13.7
20°-30°	403.6	18.6
30°-40°	422.0	19.5
40°-50°	366.0	16.9
50°-60°	272.3	12.6
60°-70°	174.7	8.1
70°-80°	93.7	4.3
80°-90°	28.3	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°	812.4	37.4
0°-40°	1234.4	56.9
0°-60°	1872.7	86.3
0°-90°	2169.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2169.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1201	1201	1201	1201	1201	
5°	1162	1181	1177	1186	1195	109
15°	1008	1032	1052	1094	1128	283
25°	807	832	866	924	978	370
35°	582	610	655	738	815	363
45°	355	382	459	558	634	279
55°	234	239	283	363	420	209
65°	148	160	176	187	201	147
75°	80	93	90	86	84	85
85°	24	30	27	22	18	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1201.0	1201.0	1201.0	1201.0	1201.0
2.5°	1188.3	1205.2	1193.9	1193.9	1195.3
5°	1161.5	1181.2	1177.0	1185.5	1195.3
7.5°	1129.2	1150.3	1151.7	1171.4	1185.5
10°	1094.0	1115.1	1122.1	1150.3	1170.0
12.5°	1051.7	1075.7	1088.3	1123.5	1151.7
15°	1008.1	1032.0	1051.7	1094.0	1127.7
17.5°	961.6	985.5	1010.9	1058.8	1095.4
20°	910.9	936.3	965.8	1013.7	1058.8
22.5°	858.8	885.6	916.6	968.7	1019.3
25°	806.7	832.1	865.9	923.6	978.5
27.5°	751.8	778.6	813.8	877.1	939.1
30°	696.9	723.7	761.7	829.3	895.4
32.5°	640.6	667.4	708.2	784.2	856.0
35°	581.5	609.6	654.7	737.8	815.2
37.5°	525.2	551.9	602.6	694.1	775.8
40°	467.4	495.6	551.9	650.5	732.1
42.5°	411.1	439.3	505.4	604.0	684.3
45°	354.8	381.5	459.0	557.5	633.6
47.5°	311.2	330.9	415.3	508.3	584.3
50°	283.0	290.0	371.7	460.4	530.8
52.5°	257.6	263.3	323.8	412.5	475.9
55°	233.7	239.3	283.0	363.2	419.6
57.5°	209.8	216.8	252.0	312.6	363.2
60°	187.3	195.7	226.7	267.5	302.7
62.5°	167.5	177.4	201.3	226.7	250.6
65°	147.8	160.5	176.0	187.3	201.3
67.5°	129.5	143.6	152.1	154.9	156.3
70°	112.6	126.7	129.5	129.5	129.5
72.5°	95.7	111.2	108.4	107.0	105.6
75°	80.3	92.9	90.1	85.9	84.5
77.5°	64.8	76.0	71.8	69.0	64.8
80°	50.7	59.1	54.9	52.1	47.9
82.5°	38.0	43.6	39.4	36.6	32.4
85°	23.9	29.6	26.8	22.5	18.3
87.5°	12.7	16.9	14.1	12.7	7.0
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	15.98	17.46	16.34	17.78	18.09	18.74	20.22	19.10	20.53	20.85
	3H	17.69	19.02	18.07	19.35	19.71	19.76	21.09	20.14	21.41	21.78
	4H	18.35	19.60	18.75	19.94	20.32	20.12	21.37	20.52	21.72	22.10
	6H	18.85	20.00	19.26	20.37	20.76	20.38	21.53	20.79	21.89	22.29
	8H	19.03	20.12	19.46	20.51	20.92	20.45	21.54	20.88	21.93	22.33
	12H	19.16	20.20	19.59	20.59	21.02	20.48	21.53	20.92	21.91	22.34
4H	2H	16.76	18.00	17.16	18.35	18.73	19.01	20.25	19.41	20.60	20.98
	3H	18.68	19.71	19.09	20.11	20.52	20.26	21.29	20.67	21.70	22.10
	4H	19.49	20.42	19.92	20.84	21.28	20.75	21.68	21.18	22.09	22.53
	6H	20.13	20.94	20.59	21.38	21.84	21.13	21.94	21.59	22.38	22.84
	8H	20.36	21.11	20.82	21.56	22.03	21.24	22.00	21.71	22.44	22.91
	12H	20.53	21.21	21.02	21.69	22.16	21.31	21.99	21.80	22.47	22.94
8H	4H	19.81	20.57	20.27	21.01	21.48	20.94	21.70	21.40	22.14	22.61
	6H	20.60	21.23	21.10	21.72	22.20	21.43	22.05	21.93	22.54	23.02
	8H	20.93	21.49	21.45	22.00	22.49	21.60	22.16	22.12	22.68	23.16
	12H	21.21	21.70	21.72	22.20	22.76	21.74	22.23	22.25	22.73	23.29
12H	4H	19.83	20.51	20.32	20.99	21.46	20.96	21.63	21.44	22.11	22.58
	6H	20.66	21.22	21.17	21.73	22.22	21.46	22.03	21.98	22.54	23.03
	8H	21.05	21.55	21.56	22.04	22.60	21.70	22.19	22.21	22.68	23.25