

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: P1059558

Luminaire Tested: S123RDR-H1165D940-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059558
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D940-X4F0-XX-UDD-SVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

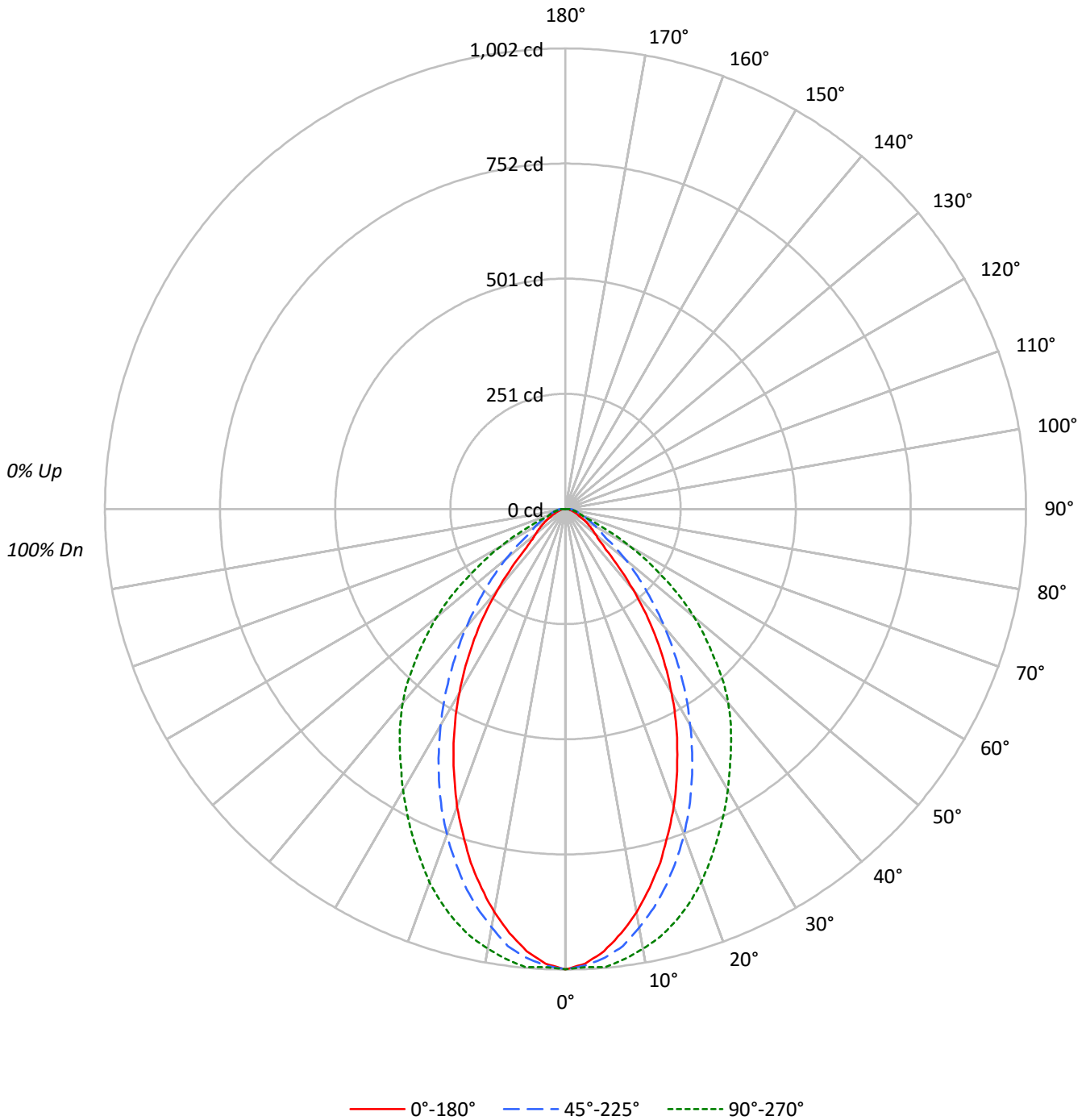
Lumens per Lamp: N/A
Luminaire Lumens: 1344.4 lumens
Efficiency: N/A
Efficacy: 36.8 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.08 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11760	11760	11760
5°	11379	11555	11790
10°	10622	11022	11585
15°	9679	10299	11283
20°	8612	9421	10804
25°	7463	8431	10188
30°	6259	7354	9581
35°	4958	6260	9007
40°	3509	5149	8448
45°	2066	4070	7602
50°	1545	3091	6659
55°	1298	2088	5349
60°	1052	1783	3798
65°	831	1520	2006
70°	724	1325	1239
75°	676	1243	1184
80°	676	1346	1177
85°	835	2007	1509

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7602 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.2	6.9
10°-20°	239.5	17.8
20°-30°	305.1	22.7
30°-40°	286.9	21.3
40°-50°	206.7	15.4
50°-60°	119.4	8.9
60°-70°	54.6	4.1
70°-80°	27.2	2.0
80°-90°	12.9	1.0
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°	636.8	47.4
0°-40°	923.7	68.7
0°-60°	1249.7	93.0
0°-90°	1344.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1344.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1002	1002	1002	1002	1002	
5°	965	982	980	990	1000	90
15°	796	825	847	894	928	222
25°	576	606	651	723	786	263
35°	346	376	437	537	628	215
45°	124	156	245	368	458	105
55°	63	66	102	194	261	57
65°	30	42	55	61	72	31
75°	15	29	27	26	26	16
85°	6	14	15	14	11	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1001.5	1001.5	1001.5	1001.5	1001.5
2.5°	990.3	1002.7	994.0	995.3	997.8
5°	965.4	981.6	980.3	990.3	1000.2
7.5°	930.6	949.2	959.2	974.1	987.8
10°	890.8	911.9	924.4	951.7	971.6
12.5°	844.7	872.1	888.3	924.4	953.0
15°	796.2	824.8	847.2	894.5	928.1
17.5°	741.5	772.6	801.2	857.2	898.2
20°	689.2	719.1	753.9	814.9	864.6
22.5°	632.0	664.3	704.1	768.8	824.8
25°	576.0	605.9	650.7	722.8	786.3
27.5°	520.0	549.9	597.2	676.8	746.4
30°	461.6	492.7	542.4	630.7	706.6
32.5°	404.3	434.2	490.2	586.0	665.6
35°	345.9	375.7	436.7	537.4	628.3
37.5°	288.6	319.7	384.4	497.6	590.9
40°	228.9	262.5	335.9	456.6	551.1
42.5°	172.9	209.0	287.4	414.3	507.6
45°	124.4	155.5	245.1	368.2	457.8
47.5°	97.0	113.2	206.5	321.0	411.8
50°	84.6	87.1	169.2	277.4	364.5
52.5°	73.4	75.9	133.1	236.4	314.8
55°	63.4	65.9	102.0	194.1	261.3
57.5°	53.5	57.2	84.6	154.3	210.2
60°	44.8	49.8	75.9	118.2	161.7
62.5°	36.1	44.8	64.7	87.1	115.7
65°	29.9	42.3	54.7	61.0	72.2
67.5°	24.9	38.6	46.0	43.5	42.3
70°	21.1	34.8	38.6	34.8	36.1
72.5°	17.4	32.3	32.3	29.9	29.9
75°	14.9	28.6	27.4	26.1	26.1
77.5°	12.4	24.9	23.6	22.4	21.1
80°	10.0	19.9	19.9	18.7	17.4
82.5°	8.7	16.2	16.2	16.2	13.7
85°	6.2	13.7	14.9	13.7	11.2
87.5°	5.0	12.4	12.4	11.2	7.5
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	8.53	9.85	8.90	10.16	10.48	15.90	17.22	16.26	17.53	17.84
	3H	9.92	11.09	10.30	11.42	11.79	16.13	17.30	16.51	17.63	17.99
	4H	10.47	11.56	10.88	11.91	12.30	16.24	17.33	16.65	17.68	18.07
	6H	10.91	11.91	11.32	12.28	12.67	16.36	17.36	16.77	17.73	18.12
	8H	11.08	12.03	11.51	12.42	12.83	16.41	17.36	16.84	17.75	18.15
	12H	11.24	12.15	11.67	12.53	12.96	16.47	17.38	16.90	17.76	18.19
4H	2H	9.63	10.72	10.03	11.07	11.46	15.86	16.95	16.26	17.30	17.68
	3H	11.29	12.19	11.71	12.59	12.99	16.22	17.11	16.63	17.51	17.92
	4H	12.10	12.90	12.54	13.32	13.77	16.41	17.21	16.85	17.63	18.07
	6H	12.74	13.43	13.20	13.88	14.34	16.64	17.33	17.10	17.78	18.24
	8H	12.98	13.62	13.44	14.07	14.54	16.74	17.39	17.21	17.84	18.31
	12H	13.19	13.76	13.67	14.24	14.72	16.87	17.44	17.36	17.93	18.40
8H	4H	12.55	13.19	13.01	13.64	14.11	16.45	17.10	16.92	17.54	18.01
	6H	13.46	13.99	13.96	14.48	14.96	16.78	17.31	17.28	17.80	18.28
	8H	13.88	14.35	14.40	14.87	15.36	16.97	17.45	17.49	17.96	18.45
	12H	14.30	14.72	14.81	15.21	15.78	17.22	17.64	17.73	18.14	18.71
12H	4H	12.60	13.17	13.09	13.66	14.13	16.44	17.01	16.92	17.49	17.97
	6H	13.59	14.07	14.11	14.58	15.08	16.79	17.27	17.32	17.79	18.28
	8H	14.13	14.55	14.65	15.05	15.62	17.05	17.47	17.57	17.97	18.54