

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: P1059546

Luminaire Tested: S123RDR-H1165D935-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059546
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D935-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

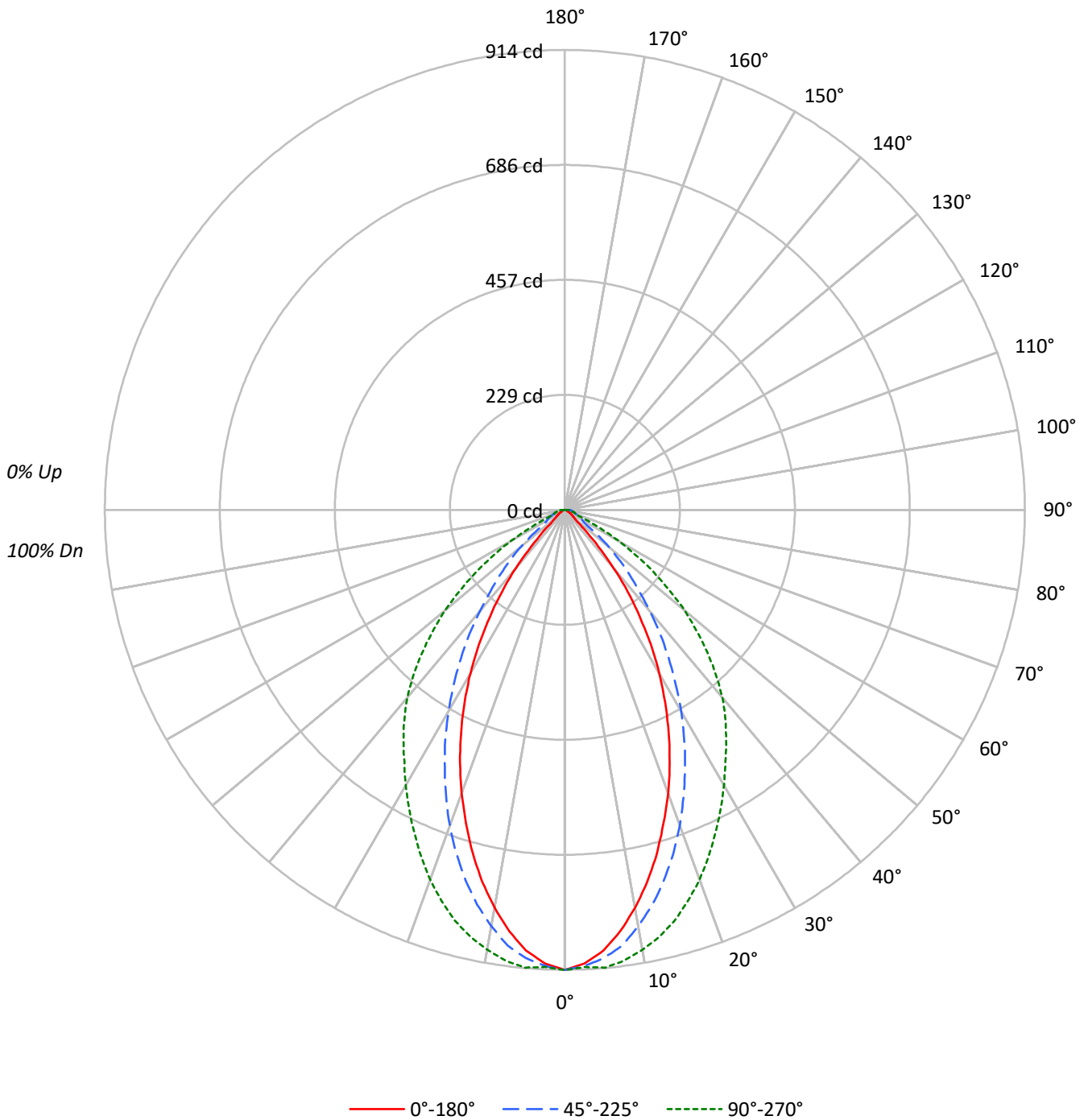
Lumens per Lamp: N/A
Luminaire Lumens: 1097.7 lumens
Efficiency: N/A
Efficacy: 30.1 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10737	10737	10737
5°	10367	10537	10764
10°	9570	10015	10587
15°	8589	9261	10269
20°	7493	8347	9774
25°	6320	7316	9169
30°	5083	6256	8569
35°	3720	5151	8009
40°	2321	4015	7459
45°	878	2992	6644
50°	417	2062	5663
55°	319	1132	4379
60°	225	961	2879
65°	167	834	1203
70°	165	783	783
75°	218	817	817
80°	325	974	893
85°	647	1617	1293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6644 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	7.6
10°-20°	215.2	19.6
20°-30°	266.4	24.3
30°-40°	238.8	21.8
40°-50°	156.6	14.3
50°-60°	78.4	7.1
60°-70°	30.5	2.8
70°-80°	17.2	1.6
80°-90°	10.6	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°	565.6	51.5
0°-40°	804.4	73.3
0°-60°	1039.4	94.7
0°-90°	1097.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1097.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	880	894	894	904	913	81
15°	706	735	762	812	845	197
25°	488	518	565	645	708	223
35°	260	294	359	467	559	162
45°	53	85	180	309	400	50
55°	16	19	55	151	214	14
65°	6	18	30	40	43	6
75°	5	18	18	18	18	5
85°	5	12	12	12	10	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	914.4	914.4	914.4	914.4	914.4
2.5°	902.3	915.6	907.1	908.3	909.5
5°	879.5	893.9	893.9	903.5	913.2
7.5°	844.7	861.5	873.5	890.3	903.5
10°	802.6	823.0	839.9	869.9	887.9
12.5°	757.0	782.2	803.8	843.5	868.7
15°	706.5	735.3	761.8	812.2	844.7
17.5°	652.4	681.3	716.1	775.0	814.6
20°	599.6	628.4	668.0	734.1	782.2
22.5°	544.3	574.3	616.4	689.7	746.1
25°	487.8	517.9	564.7	645.2	707.7
27.5°	431.3	461.4	514.2	602.0	670.4
30°	374.9	404.9	461.4	555.1	632.0
32.5°	318.4	350.8	409.7	511.8	593.6
35°	259.5	294.4	359.3	467.4	558.7
37.5°	205.5	237.9	311.2	428.9	523.9
40°	151.4	186.2	261.9	391.7	486.6
42.5°	98.5	135.8	217.5	350.8	444.6
45°	52.9	85.3	180.2	308.8	400.1
47.5°	28.8	46.9	145.4	264.3	354.4
50°	22.8	26.4	112.9	225.9	310.0
52.5°	19.2	21.6	80.5	189.8	260.7
55°	15.6	19.2	55.3	151.4	213.9
57.5°	13.2	16.8	43.3	117.7	167.0
60°	9.6	14.4	40.9	86.5	122.6
62.5°	7.2	15.6	36.0	60.1	80.5
65°	6.0	18.0	30.0	39.7	43.3
67.5°	4.8	19.2	26.4	25.2	25.2
70°	4.8	18.0	22.8	21.6	22.8
72.5°	4.8	19.2	20.4	19.2	20.4
75°	4.8	18.0	18.0	18.0	18.0
77.5°	4.8	16.8	16.8	15.6	15.6
80°	4.8	14.4	14.4	14.4	13.2
82.5°	4.8	13.2	13.2	13.2	10.8
85°	4.8	12.0	12.0	12.0	9.6
87.5°	3.6	10.8	12.0	10.8	7.2
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	0.60	1.85	0.96	2.16	2.48	14.85	16.11	15.21	16.42	16.73
	3H	2.93	4.04	3.31	4.37	4.73	14.93	16.04	15.31	16.37	16.74
	4H	4.03	5.06	4.43	5.42	5.80	15.01	16.04	15.41	16.39	16.78
	6H	5.02	5.97	5.44	6.34	6.74	15.11	16.06	15.53	16.43	16.83
	8H	5.50	6.40	5.93	6.79	7.20	15.17	16.07	15.60	16.46	16.86
	12H	6.06	6.92	6.49	7.30	7.73	15.25	16.11	15.68	16.49	16.92
4H	2H	3.85	4.88	4.25	5.23	5.61	14.70	15.74	15.11	16.09	16.47
	3H	6.16	7.01	6.58	7.41	7.82	14.88	15.72	15.29	16.13	16.53
	4H	7.53	8.29	7.97	8.71	9.15	15.03	15.79	15.47	16.21	16.65
	6H	8.62	9.27	9.08	9.72	10.19	15.25	15.91	15.72	16.35	16.82
	8H	9.08	9.69	9.55	10.13	10.61	15.38	15.99	15.85	16.44	16.91
	12H	9.57	10.11	10.06	10.59	11.07	15.55	16.09	16.04	16.57	17.05
8H	4H	8.51	9.12	8.98	9.57	10.04	15.03	15.64	15.50	16.08	16.56
	6H	10.03	10.53	10.53	11.03	11.51	15.36	15.86	15.87	16.36	16.84
	8H	10.80	11.25	11.33	11.77	12.26	15.60	16.05	16.12	16.56	17.05
	12H	11.61	12.00	12.12	12.50	13.07	15.93	16.33	16.45	16.82	17.40
12H	4H	8.68	9.22	9.17	9.71	10.18	15.01	15.55	15.50	16.03	16.51
	6H	10.34	10.79	10.87	11.31	11.80	15.38	15.83	15.91	16.35	16.84
	8H	11.30	11.70	11.82	12.19	12.77	15.69	16.09	16.21	16.59	17.16