

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: P1059555

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059555
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-H1165D940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

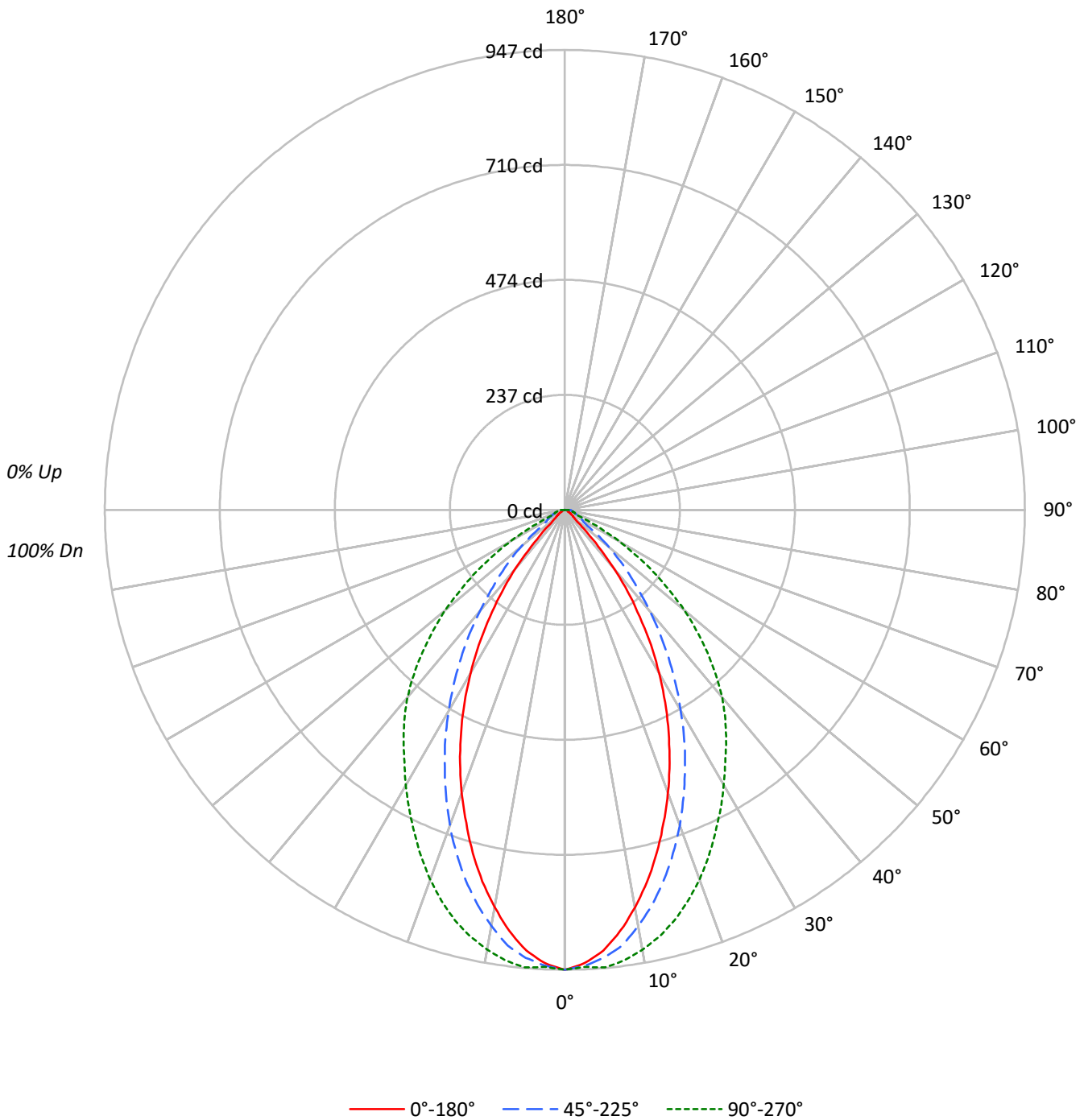
Lumens per Lamp: N/A
Luminaire Lumens: 1136.9 lumens
Efficiency: N/A
Efficacy: 31.1 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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°	11120	11120	11120
5°	10737	10913	11147
10°	9911	10371	10965
15°	8895	9590	10635
20°	7759	8646	10123
25°	6546	7578	9496
30°	5264	6478	8874
35°	3853	5334	8294
40°	2404	4159	7726
45°	910	3100	6882
50°	431	2137	5864
55°	332	1171	4535
60°	235	993	2980
65°	172	864	1245
70°	172	810	810
75°	227	848	848
80°	338	1008	926
85°	674	1671	1347

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6882 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.9	7.6
10°-20°	222.9	19.6
20°-30°	275.9	24.3
30°-40°	247.4	21.8
40°-50°	162.2	14.3
50°-60°	81.2	7.1
60°-70°	31.6	2.8
70°-80°	17.8	1.6
80°-90°	11.0	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°	585.8	51.5
0°-40°	833.1	73.3
0°-60°	1076.5	94.7
0°-90°	1136.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1136.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	911	926	926	936	946	84
15°	732	762	789	841	875	204
25°	505	536	585	668	733	231
35°	269	305	372	484	579	167
45°	55	88	187	320	414	52
55°	16	20	57	157	222	15
65°	6	19	31	41	45	6
75°	5	19	19	19	19	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°	947.0	947.0	947.0	947.0	947.0
2.5°	934.5	948.2	939.5	940.7	942.0
5°	910.9	925.8	925.8	935.8	945.7
7.5°	874.8	892.2	904.7	922.1	935.8
10°	831.2	852.4	869.8	900.9	919.6
12.5°	784.0	810.1	832.5	873.6	899.7
15°	731.7	761.6	788.9	841.2	874.8
17.5°	675.7	705.6	741.6	802.6	843.7
20°	620.9	650.8	691.9	760.3	810.1
22.5°	563.7	594.8	638.4	714.3	772.8
25°	505.2	536.3	584.9	668.2	732.9
27.5°	446.7	477.8	532.6	623.4	694.4
30°	388.2	419.4	477.8	574.9	654.5
32.5°	329.8	363.4	424.3	530.1	614.7
35°	268.8	304.9	372.1	484.1	578.6
37.5°	212.8	246.4	322.3	444.2	542.5
40°	156.8	192.9	271.3	405.7	504.0
42.5°	102.0	140.6	225.2	363.4	460.4
45°	54.8	88.4	186.7	319.8	414.4
47.5°	29.9	48.5	150.6	273.8	367.1
50°	23.6	27.4	117.0	233.9	321.0
52.5°	19.9	22.4	83.4	196.6	270.0
55°	16.2	19.9	57.2	156.8	221.5
57.5°	13.7	17.4	44.8	121.9	173.0
60°	10.0	14.9	42.3	89.6	126.9
62.5°	7.5	16.2	37.3	62.2	83.4
65°	6.2	18.7	31.1	41.1	44.8
67.5°	5.0	19.9	27.4	26.1	26.1
70°	5.0	18.7	23.6	22.4	23.6
72.5°	5.0	19.9	21.2	19.9	21.2
75°	5.0	18.7	18.7	18.7	18.7
77.5°	5.0	17.4	17.4	16.2	16.2
80°	5.0	14.9	14.9	14.9	13.7
82.5°	5.0	13.7	13.7	13.7	11.2
85°	5.0	12.4	12.4	12.4	10.0
87.5°	3.7	11.2	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	0.72	1.97	1.08	2.29	2.60	14.97	16.23	15.34	16.54	16.85
	3H	3.06	4.17	3.44	4.50	4.87	15.05	16.16	15.43	16.49	16.86
	4H	4.17	5.20	4.57	5.55	5.94	15.13	16.16	15.53	16.51	16.90
	6H	5.16	6.11	5.57	6.48	6.87	15.23	16.18	15.65	16.55	16.95
	8H	5.64	6.54	6.07	6.93	7.34	15.29	16.19	15.72	16.58	16.99
	12H	6.20	7.06	6.63	7.44	7.87	15.37	16.23	15.81	16.61	17.05
4H	2H	3.97	5.00	4.38	5.36	5.74	14.83	15.86	15.23	16.21	16.60
	3H	6.29	7.14	6.71	7.54	7.95	15.00	15.85	15.42	16.25	16.66
	4H	7.67	8.42	8.10	8.84	9.29	15.15	15.91	15.59	16.33	16.77
	6H	8.75	9.40	9.22	9.85	10.32	15.38	16.03	15.84	16.48	16.95
	8H	9.21	9.82	9.68	10.27	10.74	15.50	16.11	15.97	16.56	17.03
	12H	9.71	10.24	10.19	10.73	11.20	15.68	16.22	16.17	16.70	17.18
8H	4H	8.64	9.25	9.11	9.70	10.17	15.15	15.76	15.62	16.21	16.68
	6H	10.16	10.66	10.66	11.16	11.64	15.49	15.99	15.99	16.49	16.97
	8H	10.93	11.38	11.46	11.90	12.39	15.72	16.17	16.24	16.69	17.18
	12H	11.74	12.14	12.25	12.63	13.20	16.06	16.45	16.57	16.95	17.52
12H	4H	8.82	9.36	9.30	9.84	10.31	15.14	15.67	15.62	16.16	16.63
	6H	10.47	10.92	11.00	11.44	11.93	15.51	15.96	16.03	16.47	16.97
	8H	11.43	11.83	11.95	12.32	12.90	15.82	16.22	16.33	16.71	17.28