

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: P1059734

Luminaire Tested: S123RDR-H775D830-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059734
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H775D830-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

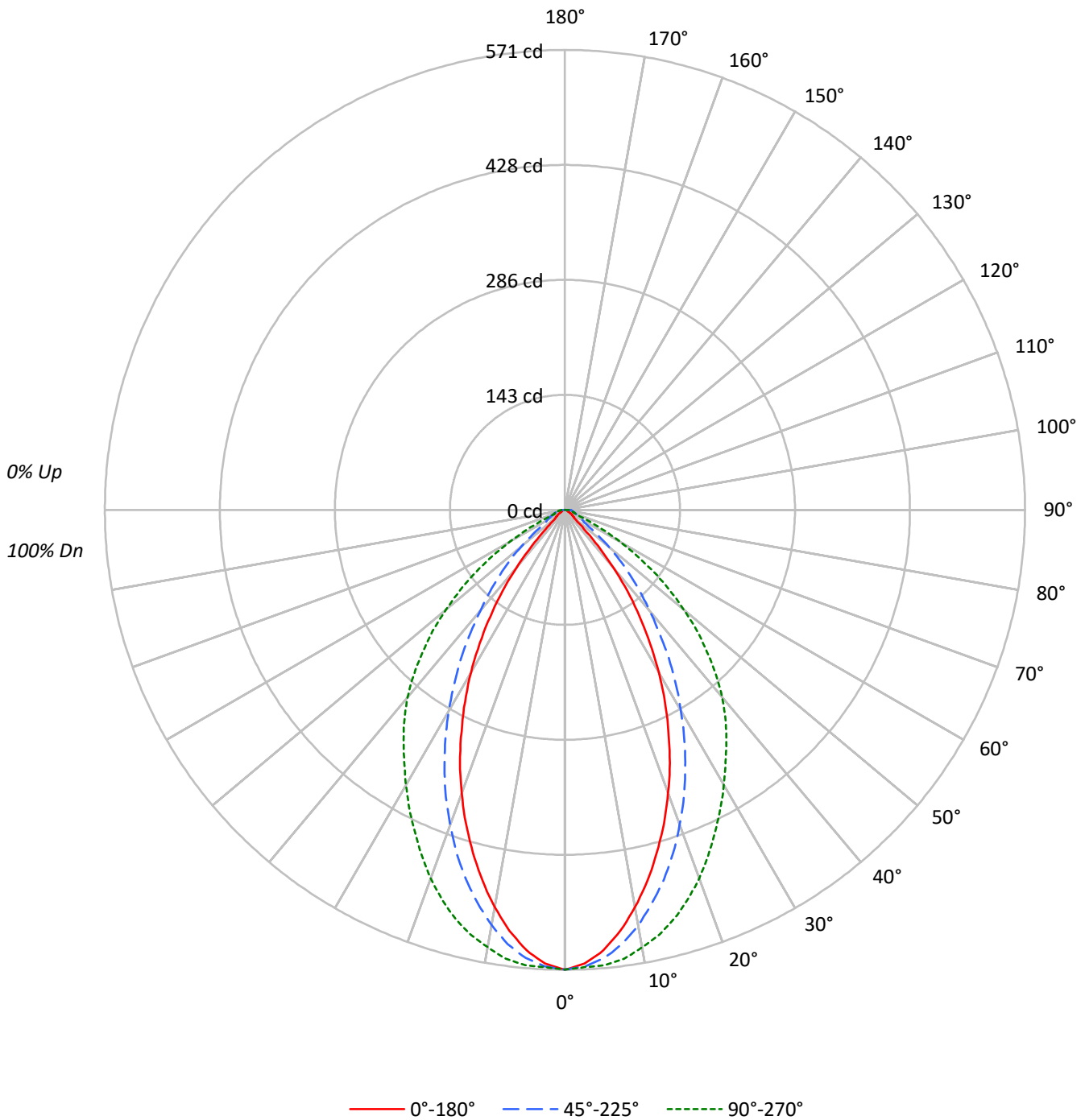
Lumens per Lamp: N/A
Luminaire Lumens: 685.7 lumens
Efficiency: N/A
Efficacy: 29.2 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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			100	
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90			90	
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81			81	
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73			73	
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66			66	
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60			60	
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55			55	
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50			50	
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46			46	
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43			43	
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40			40	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6703	6703	6703
5°	6471	6584	6687
10°	5974	6244	6577
15°	5359	5772	6387
20°	4679	5202	6086
25°	3935	4580	5711
30°	3159	3905	5349
35°	2315	3215	5004
40°	1432	2502	4655
45°	551	1885	4145
50°	270	1292	3507
55°	215	714	2751
60°	143	594	1846
65°	122	533	825
70°	120	481	481
75°	159	513	476
80°	237	649	534
85°	350	1064	701

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4145 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.3	7.6
10°-20°	134.0	19.5
20°-30°	166.3	24.3
30°-40°	149.0	21.7
40°-50°	97.9	14.3
50°-60°	49.1	7.2
60°-70°	19.4	2.8
70°-80°	10.8	1.6
80°-90°	6.8	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°	352.6	51.4
0°-40°	501.6	73.2
0°-60°	648.6	94.6
0°-90°	685.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	685.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	571	571	571	571	571	
5°	549	558	559	562	567	51
15°	441	455	475	507	525	123
25°	304	323	354	403	441	139
35°	162	183	224	293	349	100
45°	33	55	114	191	250	31
55°	10	12	35	94	134	9
65°	4	12	19	24	30	4
75°	4	11	11	10	10	4
85°	3	8	8	8	5	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	570.8	570.8	570.8	570.8	570.8
2.5°	563.8	571.7	567.3	567.3	568.2
5°	549.0	557.7	558.6	562.1	567.3
7.5°	527.2	538.5	543.8	554.2	562.1
10°	501.0	513.2	523.7	542.0	551.6
12.5°	472.2	484.4	500.1	525.4	540.3
15°	440.8	454.7	474.8	507.1	525.4
17.5°	408.5	422.4	446.9	483.5	507.1
20°	374.4	390.2	416.3	458.2	487.0
22.5°	340.4	357.9	385.8	431.2	464.3
25°	303.7	322.9	353.5	403.2	440.8
27.5°	268.8	288.9	321.2	375.3	418.1
30°	233.0	253.1	288.0	346.5	394.5
32.5°	196.4	219.1	255.7	319.5	371.0
35°	161.5	183.3	224.3	293.3	349.1
37.5°	127.4	149.3	192.0	268.0	327.3
40°	93.4	116.1	163.2	243.5	303.7
42.5°	61.1	84.7	137.9	219.1	277.6
45°	33.2	55.0	113.5	191.1	249.6
47.5°	18.3	29.7	91.6	165.0	222.6
50°	14.8	16.6	70.7	140.5	192.0
52.5°	12.2	14.0	50.6	117.0	164.1
55°	10.5	12.2	34.9	94.3	134.4
57.5°	8.7	10.5	27.9	72.4	105.6
60°	6.1	10.5	25.3	53.2	78.6
62.5°	5.2	10.5	21.8	36.7	52.4
65°	4.4	12.2	19.2	24.4	29.7
67.5°	3.5	12.2	16.6	15.7	15.7
70°	3.5	12.2	14.0	13.1	14.0
72.5°	3.5	13.1	13.1	12.2	12.2
75°	3.5	11.3	11.3	10.5	10.5
77.5°	3.5	10.5	10.5	9.6	9.6
80°	3.5	9.6	9.6	8.7	7.9
82.5°	3.5	8.7	8.7	7.9	7.0
85°	2.6	7.9	7.9	7.9	5.2
87.5°	2.6	7.0	7.9	7.0	4.4
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	0.00	0.34	0.00	0.65	0.96	13.15	14.41	13.52	14.72	15.04
	3H	1.59	2.71	1.97	3.04	3.40	13.23	14.34	13.61	14.68	15.04
	4H	2.76	3.79	3.16	4.15	4.53	13.30	14.33	13.70	14.68	15.07
	6H	3.81	4.76	4.23	5.14	5.53	13.39	14.35	13.81	14.72	15.11
	8H	4.35	5.25	4.78	5.64	6.05	13.46	14.36	13.89	14.75	15.15
	12H	4.83	5.69	5.26	6.07	6.51	13.52	14.38	13.96	14.77	15.20
4H	2H	2.33	3.37	2.74	3.72	4.10	13.01	14.05	13.42	14.40	14.78
	3H	4.79	5.64	5.21	6.04	6.45	13.19	14.03	13.60	14.44	14.84
	4H	6.13	6.89	6.57	7.31	7.75	13.32	14.07	13.75	14.49	14.94
	6H	7.27	7.92	7.73	8.37	8.84	13.53	14.19	14.00	14.63	15.10
	8H	7.78	8.39	8.25	8.84	9.31	13.66	14.27	14.13	14.72	15.19
	12H	8.23	8.77	8.72	9.26	9.73	13.82	14.36	14.31	14.84	15.32
8H	4H	7.05	7.66	7.52	8.11	8.58	13.32	13.93	13.79	14.38	14.85
	6H	8.65	9.15	9.16	9.65	10.13	13.65	14.15	14.15	14.65	15.13
	8H	9.48	9.93	10.00	10.44	10.94	13.88	14.33	14.40	14.85	15.34
	12H	10.26	10.66	10.77	11.15	11.73	14.21	14.61	14.72	15.10	15.67
12H	4H	7.22	7.76	7.70	8.24	8.72	13.31	13.85	13.80	14.33	14.81
	6H	8.97	9.42	9.49	9.93	10.43	13.68	14.13	14.20	14.65	15.14
	8H	9.97	10.37	10.49	10.87	11.44	13.99	14.39	14.51	14.89	15.46