

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: P1059798

Luminaire Tested: S123RDR-H775D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059798
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-H775D940-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

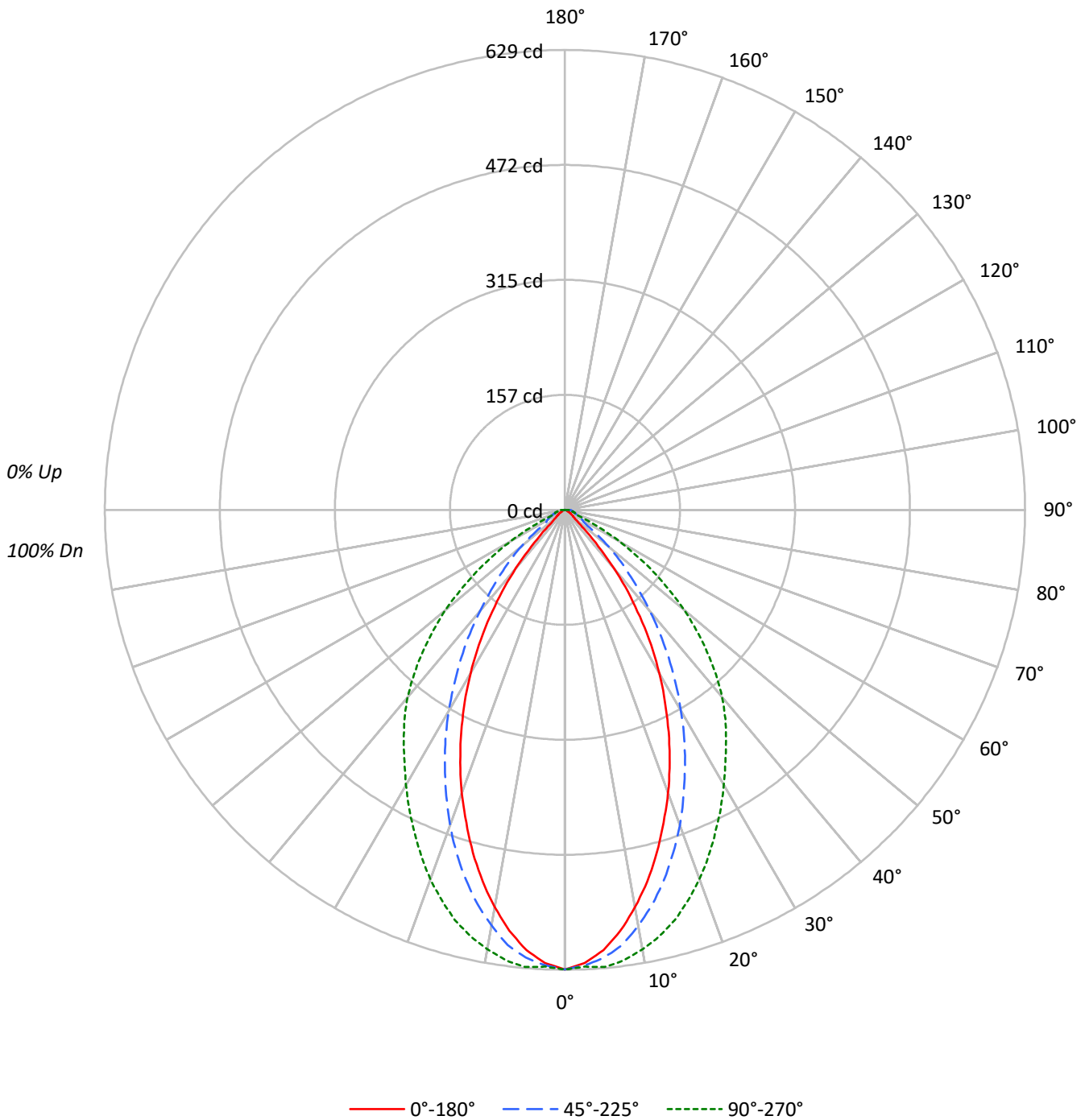
Lumens per Lamp: N/A
Luminaire Lumens: 754.7 lumens
Efficiency: N/A
Efficacy: 32.1 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	7381	7381	7381
5°	7127	7243	7400
10°	6579	6885	7278
15°	5904	6366	7059
20°	5151	5738	6719
25°	4346	5030	6303
30°	3494	4301	5891
35°	2557	3541	5506
40°	1596	2761	5127
45°	603	2058	4568
50°	287	1418	3893
55°	219	778	3009
60°	155	660	1980
65°	114	572	825
70°	113	539	539
75°	150	563	563
80°	223	669	615
85°	445	1118	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4568 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.7	7.6
10°-20°	148.0	19.6
20°-30°	183.2	24.3
30°-40°	164.2	21.8
40°-50°	107.6	14.3
50°-60°	53.9	7.1
60°-70°	21.0	2.8
70°-80°	11.8	1.6
80°-90°	7.3	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°	388.8	51.5
0°-40°	553.0	73.3
0°-60°	714.5	94.7
0°-90°	754.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	754.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	629	629	629	629	629	
5°	605	614	614	621	628	56
15°	486	506	524	558	581	135
25°	335	356	388	444	486	153
35°	178	202	247	321	384	111
45°	36	59	124	212	275	35
55°	11	13	38	104	147	10
65°	4	12	21	27	30	4
75°	3	12	12	12	12	3
85°	3	8	8	8	7	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	628.6	628.6	628.6	628.6	628.6
2.5°	620.3	629.4	623.6	624.4	625.3
5°	604.6	614.5	614.5	621.1	627.8
7.5°	580.7	592.2	600.5	612.1	621.1
10°	551.8	565.8	577.4	598.0	610.4
12.5°	520.4	537.7	552.6	579.8	597.2
15°	485.7	505.5	523.7	558.4	580.7
17.5°	448.5	468.3	492.3	532.8	560.0
20°	412.2	432.0	459.2	504.7	537.7
22.5°	374.2	394.8	423.7	474.1	512.9
25°	335.4	356.0	388.2	443.6	486.5
27.5°	296.5	317.2	353.5	413.8	460.9
30°	257.7	278.4	317.2	381.6	434.5
32.5°	218.9	241.2	281.7	351.9	408.0
35°	178.4	202.4	247.0	321.3	384.1
37.5°	141.2	163.5	213.9	294.9	360.1
40°	104.1	128.0	180.1	269.3	334.5
42.5°	67.7	93.3	149.5	241.2	305.6
45°	36.3	58.6	123.9	212.3	275.1
47.5°	19.8	32.2	99.9	181.7	243.7
50°	15.7	18.2	77.6	155.3	213.1
52.5°	13.2	14.9	55.3	130.5	179.2
55°	10.7	13.2	38.0	104.1	147.0
57.5°	9.1	11.6	29.7	80.9	114.8
60°	6.6	9.9	28.1	59.5	84.3
62.5°	5.0	10.7	24.8	41.3	55.3
65°	4.1	12.4	20.6	27.3	29.7
67.5°	3.3	13.2	18.2	17.3	17.3
70°	3.3	12.4	15.7	14.9	15.7
72.5°	3.3	13.2	14.0	13.2	14.0
75°	3.3	12.4	12.4	12.4	12.4
77.5°	3.3	11.6	11.6	10.7	10.7
80°	3.3	9.9	9.9	9.9	9.1
82.5°	3.3	9.1	9.1	9.1	7.4
85°	3.3	8.3	8.3	8.3	6.6
87.5°	2.5	7.4	8.3	7.4	5.0
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	0.00	0.58	0.00	0.89	1.20	13.55	14.80	13.91	15.11	15.43
	3H	1.64	2.75	2.02	3.08	3.45	13.63	14.74	14.01	15.07	15.43
	4H	2.74	3.78	3.15	4.13	4.51	13.70	14.74	14.11	15.09	15.47
	6H	3.73	4.68	4.15	5.05	5.45	13.81	14.76	14.22	15.13	15.52
	8H	4.21	5.11	4.64	5.50	5.91	13.87	14.76	14.30	15.15	15.56
	12H	4.77	5.63	5.20	6.01	6.44	13.95	14.80	14.38	15.19	15.62
4H	2H	2.55	3.58	2.95	3.93	4.32	13.40	14.43	13.80	14.79	15.17
	3H	4.87	5.71	5.28	6.12	6.52	13.58	14.42	13.99	14.83	15.23
	4H	6.24	7.00	6.68	7.42	7.86	13.73	14.48	14.16	14.90	15.35
	6H	7.33	7.98	7.79	8.43	8.90	13.95	14.60	14.42	15.05	15.52
	8H	7.78	8.39	8.26	8.84	9.31	14.08	14.69	14.55	15.13	15.61
	12H	8.28	8.82	8.77	9.30	9.78	14.25	14.79	14.74	15.27	15.75
8H	4H	7.22	7.83	7.69	8.27	8.75	13.73	14.33	14.20	14.78	15.25
	6H	8.74	9.24	9.24	9.73	10.22	14.06	14.56	14.57	15.06	15.54
	8H	9.51	9.96	10.03	10.48	10.97	14.29	14.74	14.82	15.26	15.75
	12H	10.32	10.72	10.84	11.21	11.79	14.63	15.03	15.15	15.52	16.10
12H	4H	7.39	7.93	7.88	8.41	8.89	13.71	14.25	14.20	14.73	15.21
	6H	9.05	9.50	9.58	10.02	10.51	14.08	14.53	14.60	15.05	15.54
	8H	10.01	10.41	10.53	10.90	11.48	14.39	14.79	14.91	15.29	15.86