

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: P1055808

Luminaire Tested: S123R3DR-H775D930-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055808
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-H775D930-X4F0-XX-UDD-FLL-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

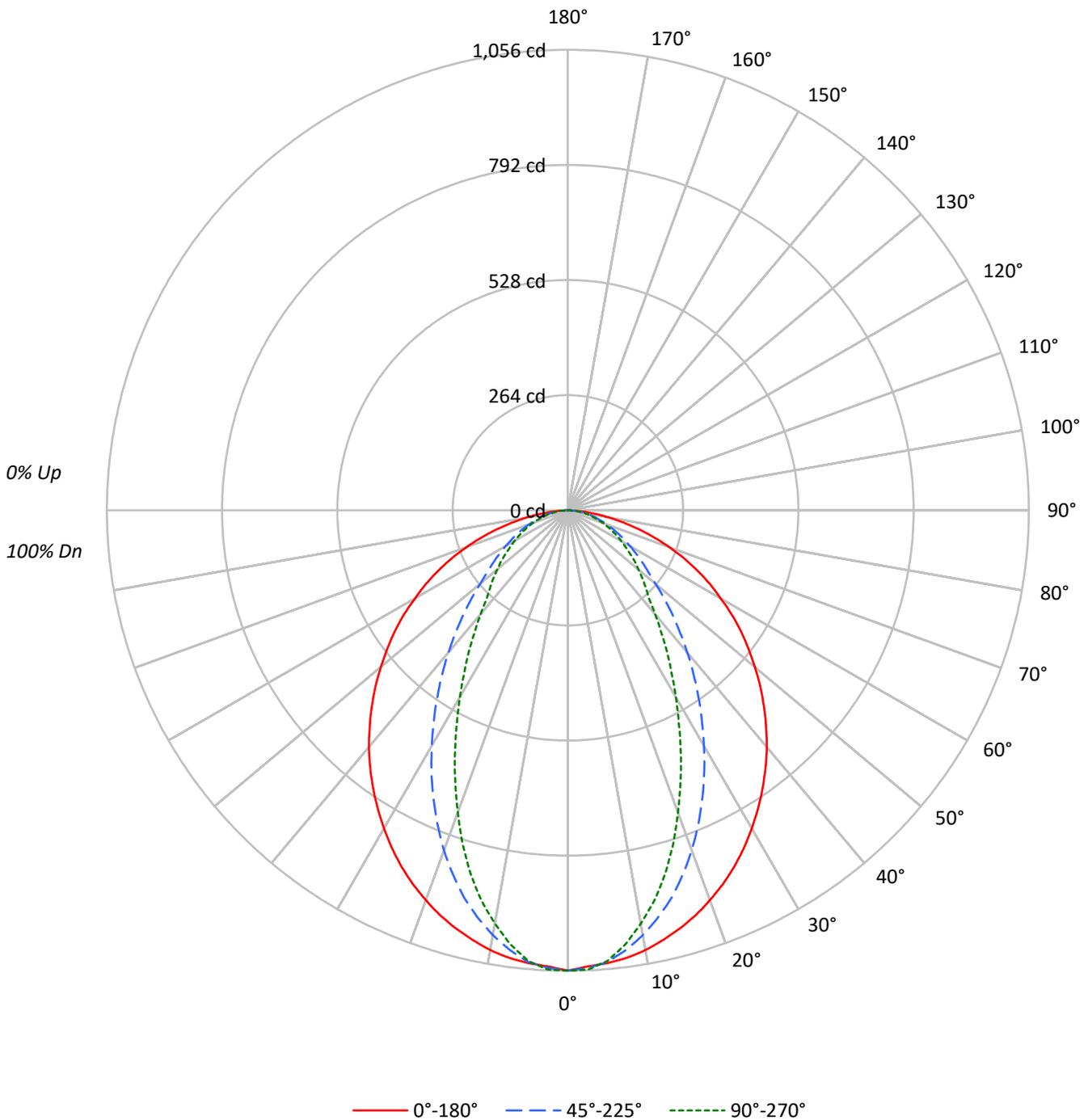
Lumens per Lamp: N/A
Luminaire Lumens: 1851.3 lumens
Efficiency: N/A
Efficacy: 77.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12727	12727	12727
5°	12613	12584	12555
10°	12536	12111	11782
15°	12387	11471	10760
20°	12207	10646	9461
25°	11994	9694	8140
30°	11728	8672	6880
35°	11446	7670	5811
40°	11159	6697	4884
45°	10824	5775	4307
50°	10485	4916	3954
55°	10174	4381	3651
60°	9746	3959	3407
65°	9346	3626	3198
70°	8710	3338	3007
75°	7798	3088	2832
80°	6686	2854	2631
85°	4689	2614	2518

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10824 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	5.3
10°-20°	258.9	14.0
20°-30°	341.0	18.4
30°-40°	346.1	18.7
40°-50°	300.8	16.3
50°-60°	235.7	12.7
60°-70°	160.1	8.7
70°-80°	86.8	4.7
80°-90°	23.9	1.3
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°	697.8	37.7
0°-40°	1043.9	56.4
0°-60°	1580.5	85.4
0°-90°	1851.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1851.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1056	1056	1056	1056	1056	
5°	1042	1055	1040	1030	1037	99
15°	992	978	919	874	862	280
25°	902	847	729	638	612	415
35°	778	685	521	422	395	486
45°	635	509	339	261	253	490
55°	484	336	208	178	174	432
65°	328	182	127	114	112	324
75°	167	84	66	62	61	179
85°	34	20	19	17	18	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1055.6	1055.6	1055.6	1055.6	1055.6
2.5°	1046.9	1060.3	1050.0	1050.8	1054.0
5°	1042.2	1054.8	1039.8	1030.3	1037.4
7.5°	1035.0	1044.5	1016.9	1001.9	1004.3
10°	1024.0	1027.2	989.3	965.6	962.4
12.5°	1009.0	1003.5	956.1	921.4	915.8
15°	992.4	978.2	919.0	874.0	862.1
17.5°	973.5	949.8	875.6	820.3	802.1
20°	951.4	918.2	829.8	759.5	737.4
22.5°	927.7	885.0	780.0	697.1	674.2
25°	901.6	847.1	728.7	637.9	611.9
27.5°	873.2	809.2	676.6	579.5	550.3
30°	842.4	769.8	622.9	522.7	494.2
32.5°	810.8	727.9	571.6	469.8	442.1
35°	777.7	685.3	521.1	421.6	394.8
37.5°	743.7	641.9	472.1	375.8	350.5
40°	709.0	597.7	425.5	333.2	310.3
42.5°	671.9	553.4	380.5	292.9	275.5
45°	634.8	509.2	338.7	261.3	252.6
47.5°	597.7	464.2	299.2	239.2	231.3
50°	559.0	420.8	262.1	218.7	210.8
52.5°	521.1	378.2	231.3	199.0	193.4
55°	484.0	336.3	208.4	177.6	173.7
57.5°	445.3	295.3	185.5	161.1	156.3
60°	404.2	255.8	164.2	143.7	141.3
62.5°	367.1	218.7	145.3	128.7	126.3
65°	327.6	181.6	127.1	113.7	112.1
67.5°	287.4	150.8	110.5	99.5	98.7
70°	247.1	127.1	94.7	86.1	85.3
72.5°	207.6	105.0	79.7	74.2	72.6
75°	167.4	83.7	66.3	61.6	60.8
77.5°	131.1	64.7	52.9	49.7	48.9
80°	96.3	48.2	41.1	38.7	37.9
82.5°	63.2	33.2	29.2	27.6	27.6
85°	33.9	20.5	18.9	17.4	18.2
87.5°	11.8	8.7	8.7	7.9	8.7
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	19.40	20.89	19.76	21.20	21.52	14.55	16.04	14.91	16.35	16.67
	3H	21.28	22.62	21.66	22.95	23.31	16.17	17.51	16.55	17.84	18.20
	4H	22.04	23.29	22.44	23.64	24.02	16.81	18.07	17.21	18.42	18.79
	6H	22.60	23.76	23.02	24.13	24.52	17.30	18.46	17.71	18.83	19.22
	8H	22.78	23.88	23.20	24.27	24.67	17.47	18.57	17.90	18.96	19.36
	12H	22.87	23.93	23.30	24.31	24.74	17.59	18.65	18.02	19.03	19.46
4H	2H	19.44	20.70	19.84	21.05	21.43	15.27	16.53	15.67	16.88	17.26
	3H	21.46	22.50	21.87	22.90	23.30	17.09	18.14	17.51	18.54	18.94
	4H	22.28	23.22	22.71	23.63	24.07	17.84	18.78	18.27	19.20	19.64
	6H	22.96	23.78	23.42	24.22	24.68	18.45	19.27	18.91	19.71	20.17
	8H	23.19	23.95	23.65	24.40	24.87	18.66	19.43	19.13	19.87	20.34
	12H	23.34	24.02	23.82	24.50	24.97	18.83	19.51	19.31	19.99	20.46
8H	4H	22.30	23.06	22.76	23.51	23.98	18.22	18.99	18.69	19.43	19.90
	6H	23.03	23.66	23.53	24.15	24.63	18.95	19.58	19.45	20.07	20.55
	8H	23.30	23.87	23.81	24.38	24.86	19.24	19.81	19.75	20.32	20.80
	12H	23.51	24.01	24.02	24.50	25.07	19.48	19.98	19.99	20.48	21.04
12H	4H	22.29	22.97	22.77	23.45	23.92	18.28	18.96	18.76	19.44	19.91
	6H	23.01	23.58	23.53	24.09	24.58	19.03	19.60	19.55	20.11	20.60
	8H	23.32	23.82	23.83	24.31	24.88	19.38	19.88	19.89	20.37	20.94