

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055807

Luminaire Tested: S123R3DR-H775D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055807
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-H775D930-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

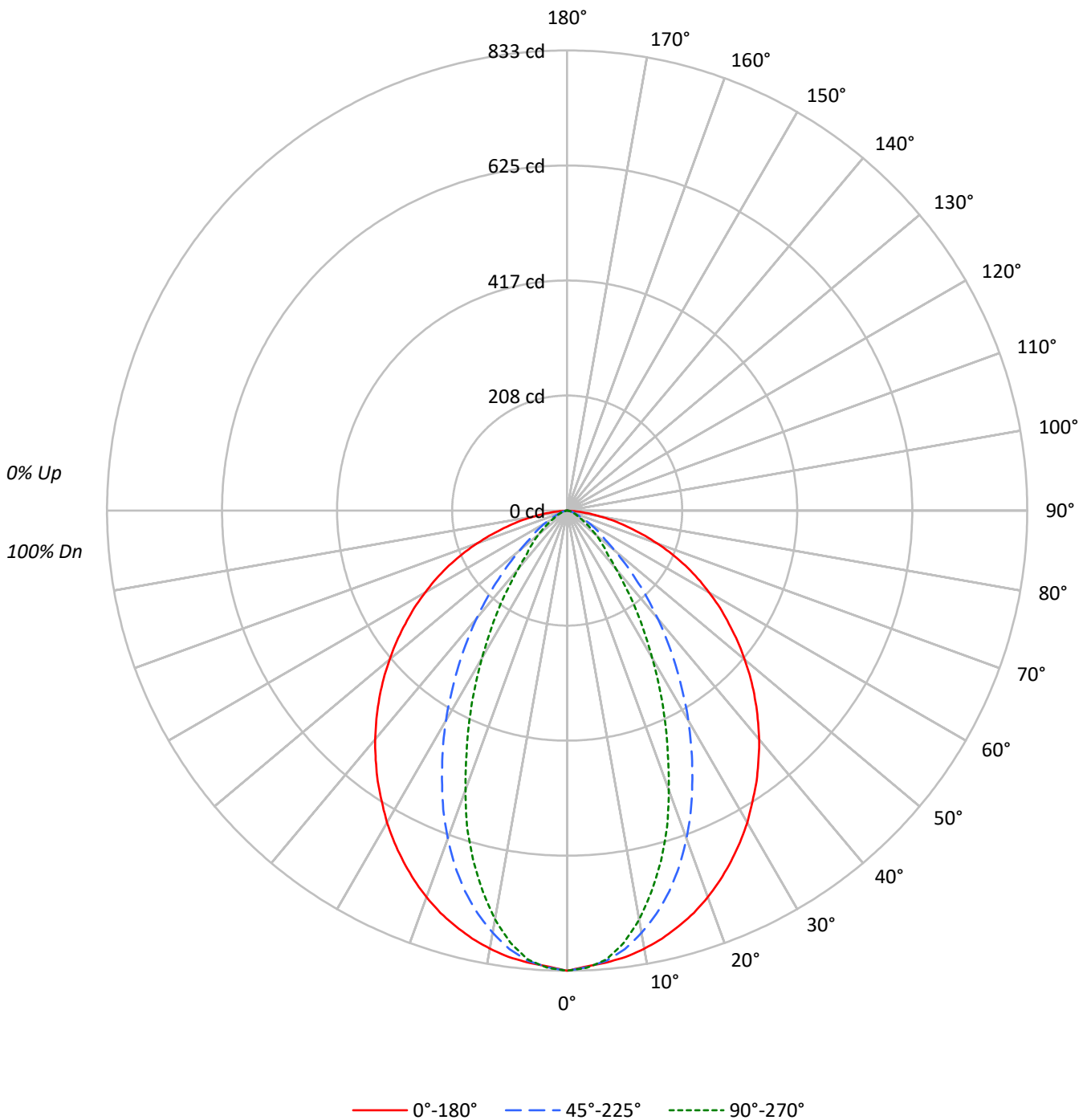
Lumens per Lamp: N/A
Luminaire Lumens: 1158.3 lumens
Efficiency: N/A
Efficacy: 48.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (A_{in}): 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	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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10042	10042	10042
5°	9937	9899	9871
10°	9859	9501	9201
15°	9726	8908	8189
20°	9552	8104	6899
25°	9327	7132	5566
30°	9078	6112	4286
35°	8797	5042	3172
40°	8511	4013	2162
45°	8198	3003	1628
50°	7863	2088	1274
55°	7517	1526	929
60°	7159	1143	666
65°	6735	765	519
70°	6095	557	416
75°	5259	405	331
80°	4221	326	271
85°	2186	332	221

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8198 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.0	6.6
10°-20°	200.4	17.3
20°-30°	251.8	21.7
30°-40°	234.5	20.2
40°-50°	179.5	15.5
50°-60°	119.3	10.3
60°-70°	64.3	5.6
70°-80°	26.3	2.3
80°-90°	5.1	0.4
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°	529.2	45.7
0°-40°	763.8	65.9
0°-60°	1062.6	91.7
0°-90°	1158.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1158.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	821	830	818	815	816	78
15°	779	767	714	672	656	220
25°	701	654	536	447	418	323
35°	598	509	343	242	216	374
45°	481	355	176	103	96	371
55°	358	207	73	50	44	320
65°	236	80	27	20	18	233
75°	113	19	9	8	7	121
85°	16	2	2	2	2	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	832.9	832.9	832.9	832.9	832.9
2.5°	825.8	836.1	827.4	828.2	828.2
5°	821.1	829.8	817.9	814.8	815.6
7.5°	814.8	820.3	800.6	790.3	788.7
10°	805.3	806.9	776.1	757.9	751.6
12.5°	793.5	787.9	747.7	717.7	705.8
15°	779.2	766.6	713.7	671.9	656.1
17.5°	763.5	742.1	675.0	620.6	601.6
20°	744.5	714.5	631.6	563.7	537.7
22.5°	724.0	685.3	585.8	505.3	476.1
25°	701.1	653.7	536.1	446.9	418.4
27.5°	677.4	619.8	487.1	391.6	362.4
30°	652.1	585.0	439.0	337.9	307.9
32.5°	624.5	547.1	389.2	288.2	258.2
35°	597.7	509.2	342.6	242.4	215.5
37.5°	569.2	471.3	297.6	202.1	172.1
40°	540.8	432.7	255.0	162.6	137.4
42.5°	510.8	394.0	214.7	129.5	109.7
45°	480.8	355.3	176.1	103.4	95.5
47.5°	450.8	316.6	142.1	89.2	81.3
50°	419.2	279.5	111.3	75.8	67.9
52.5°	389.2	242.4	86.8	62.4	55.3
55°	357.6	206.9	72.6	50.5	44.2
57.5°	328.4	170.5	60.0	39.5	34.7
60°	296.9	138.2	47.4	30.8	27.6
62.5°	266.9	108.2	36.3	24.5	22.1
65°	236.1	79.7	26.8	19.7	18.2
67.5°	205.3	57.6	20.5	15.8	15.0
70°	172.9	43.4	15.8	12.6	11.8
72.5°	142.1	30.8	11.8	10.3	9.5
75°	112.9	18.9	8.7	7.9	7.1
77.5°	86.8	11.1	6.3	6.3	5.5
80°	60.8	6.3	4.7	4.7	3.9
82.5°	37.1	3.9	3.2	3.2	3.2
85°	15.8	2.4	2.4	2.4	1.6
87.5°	2.4	0.8	0.8	0.8	0.8
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	17.83	19.18	18.19	19.50	19.81	6.40	7.76	6.77	8.07	8.39
	3H	19.58	20.79	19.96	21.11	21.48	7.06	8.27	7.44	8.60	8.96
	4H	20.28	21.40	20.68	21.75	22.14	7.26	8.39	7.66	8.74	9.12
	6H	20.79	21.83	21.21	22.20	22.59	7.38	8.41	7.79	8.78	9.18
	8H	20.93	21.91	21.36	22.30	22.71	7.42	8.40	7.85	8.79	9.19
	12H	20.98	21.92	21.42	22.30	22.73	7.43	8.36	7.86	8.75	9.18
4H	2H	17.63	18.76	18.04	19.11	19.49	6.96	8.08	7.36	8.43	8.81
	3H	19.43	20.35	19.84	20.75	21.15	7.75	8.68	8.17	9.08	9.48
	4H	20.12	20.95	20.56	21.36	21.81	8.01	8.84	8.45	9.26	9.70
	6H	20.69	21.40	21.15	21.85	22.31	8.21	8.92	8.67	9.36	9.83
	8H	20.87	21.53	21.34	21.98	22.45	8.26	8.93	8.73	9.37	9.84
	12H	20.95	21.54	21.44	22.02	22.50	8.30	8.88	8.78	9.37	9.84
8H	4H	20.00	20.66	20.47	21.11	21.58	8.33	8.99	8.79	9.44	9.91
	6H	20.55	21.09	21.05	21.59	22.07	8.57	9.11	9.07	9.61	10.09
	8H	20.73	21.21	21.25	21.73	22.22	8.66	9.15	9.18	9.66	10.15
	12H	20.83	21.26	21.35	21.76	22.33	8.74	9.17	9.26	9.67	10.24
12H	4H	19.96	20.54	20.44	21.02	21.50	8.37	8.96	8.86	9.44	9.91
	6H	20.49	20.98	21.02	21.49	21.99	8.62	9.10	9.14	9.62	10.11
	8H	20.69	21.12	21.20	21.61	22.18	8.75	9.17	9.26	9.67	10.24