

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: P242354

Luminaire Tested: S122RDRP-S485D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242354
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S485D927-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

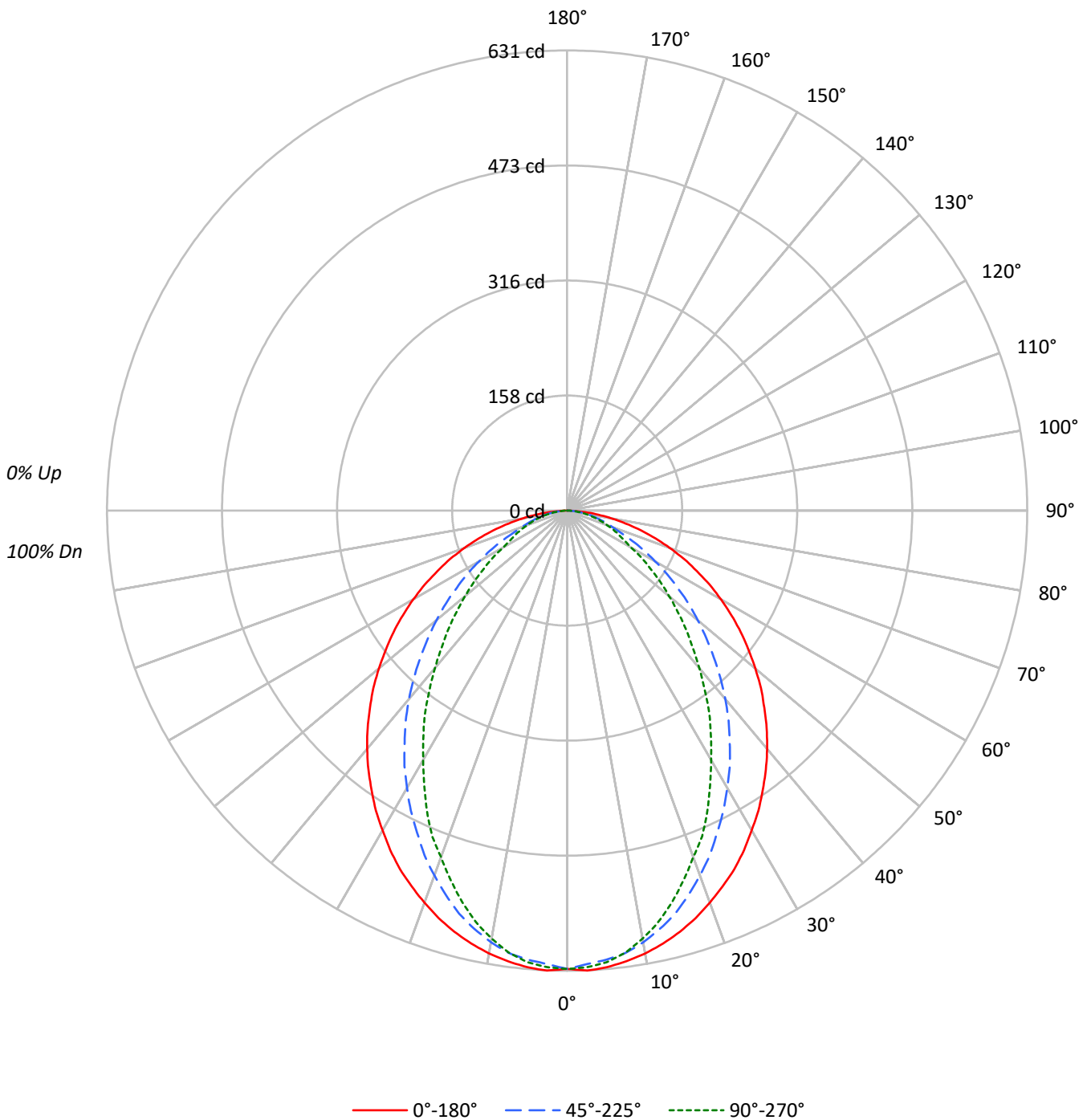
Lumens per Lamp: N/A
Luminaire Lumens: 1292.6 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
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	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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																												
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74																												
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64																												
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55																												
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49																												
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43																												
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39																												
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35																												
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32																												
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11971	11971	11971
5°	12017	11822	11887
10°	11926	11628	11529
15°	11788	11284	10958
20°	11599	10792	10251
25°	11404	10233	9563
30°	11134	9658	8683
35°	10873	9034	7908
40°	10607	8387	7014
45°	10296	7661	6206
50°	9977	6928	5411
55°	9654	6140	4646
60°	9272	5311	3855
65°	8843	4462	3511
70°	8331	3676	3230
75°	7705	3349	3017
80°	6801	2995	2742
85°	5354	2360	2360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10296 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.9	4.6
10°-20°	161.7	12.5
20°-30°	227.0	17.6
30°-40°	247.5	19.1
40°-50°	227.4	17.6
50°-60°	178.6	13.8
60°-70°	116.3	9.0
70°-80°	59.9	4.6
80°-90°	15.3	1.2
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
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0°-30°	447.7	34.6
0°-40°	695.1	53.8
0°-60°	1101.2	85.2
0°-90°	1292.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1292.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	628	626	618	623	622	60
15°	598	592	572	561	556	168
25°	543	524	487	464	455	250
35°	468	438	388	353	340	293
45°	382	344	284	244	230	295
55°	291	246	185	151	140	260
65°	196	150	99	80	78	195
75°	105	65	46	42	41	111
85°	24	12	11	11	11	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	628.5	628.5	628.5	628.5	628.5
2.5°	631.4	628.5	622.3	628.0	626.8
5°	628.5	625.7	618.3	623.4	621.7
7.5°	623.4	620.0	612.0	614.3	611.5
10°	616.6	612.6	601.2	599.5	596.1
12.5°	608.1	602.9	587.6	584.2	577.9
15°	597.8	591.6	572.2	561.4	555.7
17.5°	585.9	576.8	552.9	540.4	531.3
20°	572.2	560.8	532.4	518.2	505.7
22.5°	557.4	544.3	511.4	492.0	483.5
25°	542.6	524.4	486.9	463.6	455.0
27.5°	525.0	505.7	464.1	437.4	424.3
30°	506.2	484.6	439.1	410.1	394.8
32.5°	488.0	461.9	415.2	381.1	366.9
35°	467.6	438.5	388.5	352.7	340.1
37.5°	447.7	416.4	363.5	324.2	310.0
40°	426.6	392.5	337.3	296.9	282.1
42.5°	405.0	368.6	311.1	269.0	254.8
45°	382.2	344.1	284.4	244.0	230.4
47.5°	360.6	320.2	258.8	218.4	205.9
50°	336.7	296.3	233.8	194.5	182.6
52.5°	313.4	270.8	209.9	172.3	161.5
55°	290.7	246.3	184.9	150.7	139.9
57.5°	267.3	221.8	162.7	130.8	121.7
60°	243.4	197.9	139.4	110.3	101.2
62.5°	220.1	174.6	119.4	92.1	87.6
65°	196.2	150.2	99.0	79.6	77.9
67.5°	173.5	127.4	79.6	70.0	68.3
70°	149.6	105.2	66.0	60.3	58.0
72.5°	126.8	84.8	55.2	50.6	49.5
75°	104.7	64.8	45.5	41.5	41.0
77.5°	82.5	46.1	35.8	33.6	32.4
80°	62.0	33.0	27.3	25.0	25.0
82.5°	43.2	22.2	18.8	17.6	17.6
85°	24.5	12.5	10.8	10.8	10.8
87.5°	9.1	4.6	4.6	4.0	4.0
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	19.86	21.38	20.22	21.69	22.01	15.82	17.34	16.18	17.65	17.97
	3H	21.62	22.99	22.00	23.32	23.68	17.09	18.45	17.46	18.78	19.14
	4H	22.29	23.57	22.69	23.92	24.30	17.59	18.87	17.99	19.22	19.60
	6H	22.78	23.96	23.19	24.33	24.72	17.97	19.15	18.38	19.52	19.91
	8H	22.95	24.07	23.37	24.46	24.86	18.09	19.22	18.52	19.61	20.01
	12H	23.05	24.13	23.48	24.51	24.94	18.17	19.25	18.60	19.63	20.06
4H	2H	19.96	21.24	20.36	21.59	21.97	16.52	17.80	16.91	18.14	18.52
	3H	21.90	22.96	22.31	23.36	23.76	17.96	19.02	18.37	19.42	19.82
	4H	22.65	23.60	23.08	24.02	24.46	18.56	19.52	18.99	19.93	20.37
	6H	23.24	24.07	23.70	24.51	24.97	19.05	19.88	19.50	20.32	20.78
	8H	23.45	24.23	23.92	24.67	25.14	19.21	19.99	19.67	20.43	20.90
	12H	23.61	24.30	24.09	24.78	25.25	19.33	20.02	19.81	20.50	20.97
8H	4H	22.67	23.45	23.13	23.89	24.36	18.91	19.69	19.38	20.13	20.60
	6H	23.31	23.95	23.81	24.44	24.92	19.50	20.14	20.00	20.63	21.11
	8H	23.56	24.14	24.07	24.65	25.13	19.72	20.30	20.23	20.81	21.29
	12H	23.76	24.27	24.27	24.77	25.33	19.90	20.41	20.41	20.90	21.46
12H	4H	22.66	23.35	23.14	23.83	24.30	18.96	19.65	19.44	20.13	20.60
	6H	23.29	23.87	23.80	24.38	24.86	19.56	20.14	20.08	20.65	21.14
	8H	23.57	24.08	24.08	24.58	25.14	19.83	20.34	20.34	20.84	21.40