

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: P242525

Luminaire Tested: S123RDRP-S340D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242525
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S340D927-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

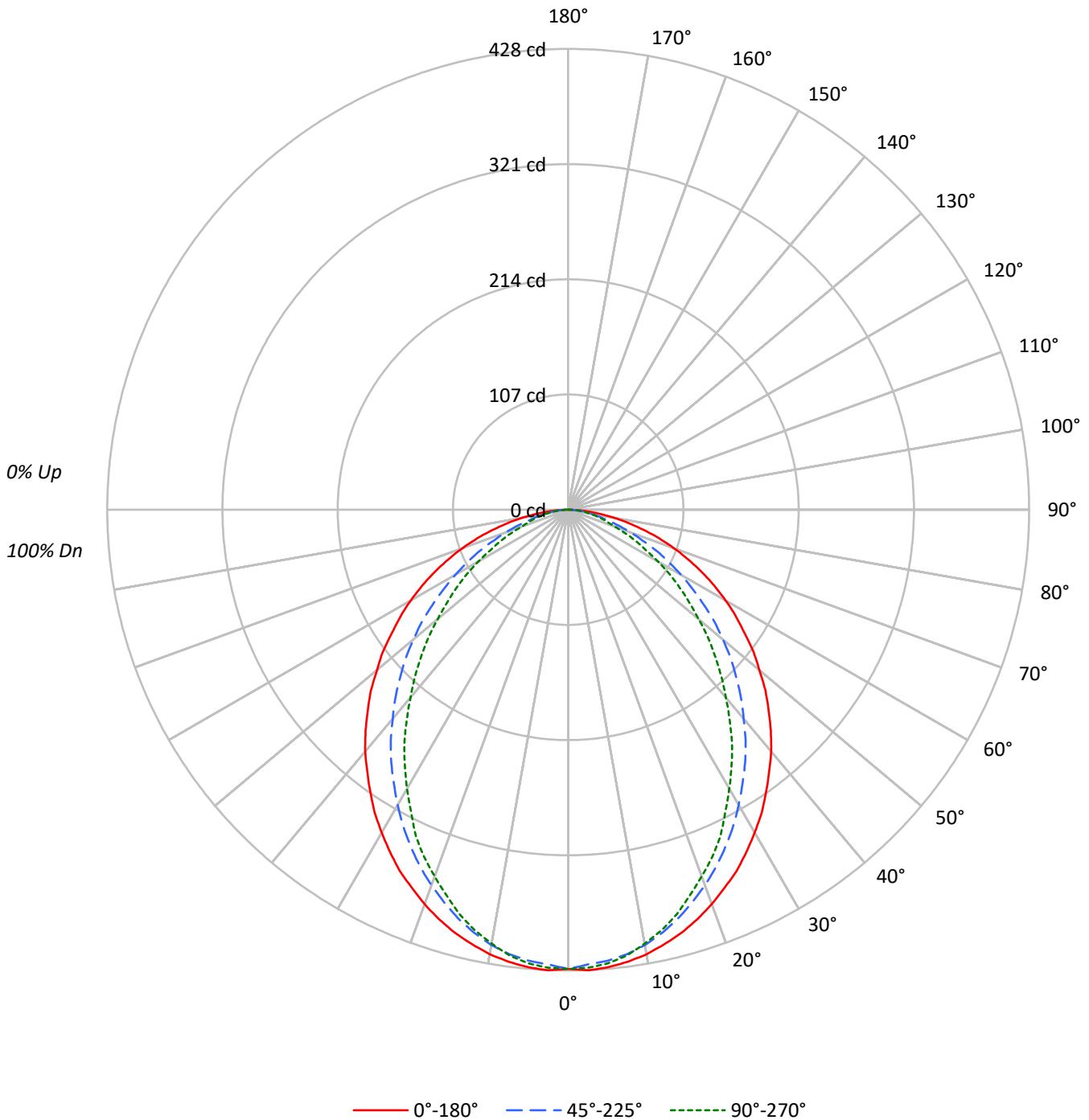
Lumens per Lamp: N/A
Luminaire Lumens: 963.5 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86																												
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73																												
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62																												
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54																												
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47																												
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42																												
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37																												
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																												
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																												
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5170	5170	5170
5°	5189	5118	5147
10°	5160	5054	5037
15°	5105	4935	4883
20°	5028	4787	4676
25°	4950	4621	4474
30°	4846	4430	4188
35°	4740	4238	3926
40°	4641	4011	3601
45°	4512	3788	3308
50°	4369	3536	2981
55°	4224	3246	2675
60°	4092	2936	2339
65°	3918	2599	2005
70°	3703	2183	1620
75°	3386	1719	1522
80°	3016	1522	1403
85°	2545	1349	1252

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4512 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.1	4.2
10°-20°	111.5	11.6
20°-30°	160.6	16.7
30°-40°	180.8	18.8
40°-50°	173.0	18.0
50°-60°	141.6	14.7
60°-70°	95.5	9.9
70°-80°	47.9	5.0
80°-90°	12.5	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°	312.2	32.4
0°-40°	493.0	51.2
0°-60°	807.6	83.8
0°-90°	963.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	963.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	426	426	426	426	426	
5°	426	425	421	424	423	40
15°	407	403	393	392	389	115
25°	370	362	346	338	334	170
35°	320	308	286	272	265	200
45°	263	248	221	201	193	203
55°	200	183	154	134	127	179
65°	137	118	91	74	70	135
75°	72	56	37	33	32	77
85°	18	11	10	9	9	21
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	426.5	426.5	426.5	426.5	426.5
2.5°	428.2	426.8	422.7	426.5	425.8
5°	426.5	424.7	420.6	423.7	423.0
7.5°	423.4	421.6	416.4	418.5	417.5
10°	419.2	416.8	410.6	410.9	409.2
12.5°	413.3	410.6	402.6	402.3	400.2
15°	406.8	403.0	393.3	391.5	389.1
17.5°	398.8	394.7	382.5	379.1	375.6
20°	389.8	384.3	371.1	366.6	362.5
22.5°	379.8	373.2	359.0	353.1	349.3
25°	370.1	361.5	345.5	338.3	334.5
27.5°	358.3	349.0	331.7	322.0	316.1
30°	346.2	335.9	316.5	304.7	299.2
32.5°	334.1	322.0	301.3	288.1	282.2
35°	320.3	307.8	286.4	271.5	265.3
37.5°	306.5	293.0	270.5	253.9	246.3
40°	293.3	278.1	253.5	235.5	227.6
42.5°	278.4	263.2	237.6	217.6	210.6
45°	263.2	247.7	221.0	201.3	193.0
47.5°	248.3	231.1	204.8	183.3	176.1
50°	231.7	215.5	187.5	166.0	158.1
52.5°	216.9	198.9	171.2	148.7	141.8
55°	199.9	183.0	153.6	133.5	126.6
57.5°	184.7	166.4	136.6	117.6	111.7
60°	168.8	149.8	121.1	102.4	96.5
62.5°	152.9	133.9	105.1	87.9	81.6
65°	136.6	117.6	90.6	73.7	69.9
67.5°	120.4	101.0	74.7	61.9	57.8
70°	104.5	85.8	61.6	49.5	45.7
72.5°	88.5	70.2	48.8	39.4	38.4
75°	72.3	55.7	36.7	33.2	32.5
77.5°	57.4	42.2	28.7	26.6	25.9
80°	43.2	29.1	21.8	20.8	20.1
82.5°	29.7	18.0	15.6	14.5	14.5
85°	18.3	10.7	9.7	9.0	9.0
87.5°	8.3	4.5	4.5	4.2	3.8
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	17.16	18.71	17.52	19.03	19.34	14.53	16.08	14.89	16.40	16.71
	3H	18.93	20.33	19.31	20.66	21.02	15.64	17.04	16.02	17.36	17.73
	4H	19.59	20.91	19.99	21.25	21.63	16.03	17.35	16.43	17.69	18.07
	6H	20.07	21.29	20.49	21.65	22.05	16.35	17.57	16.76	17.93	18.32
	8H	20.22	21.38	20.65	21.77	22.17	16.46	17.62	16.89	18.01	18.41
	12H	20.33	21.43	20.76	21.82	22.24	16.54	17.64	16.97	18.03	18.45
4H	2H	17.42	18.73	17.81	19.08	19.45	15.24	16.55	15.64	16.90	17.28
	3H	19.38	20.47	19.79	20.87	21.27	16.52	17.61	16.93	18.01	18.41
	4H	20.15	21.13	20.58	21.55	21.98	17.00	17.98	17.43	18.40	18.83
	6H	20.74	21.60	21.20	22.04	22.50	17.42	18.27	17.87	18.71	19.17
	8H	20.94	21.74	21.40	22.18	22.65	17.56	18.36	18.02	18.80	19.27
	12H	21.08	21.80	21.56	22.28	22.75	17.67	18.39	18.15	18.86	19.33
8H	4H	20.20	21.00	20.67	21.45	21.91	17.32	18.12	17.78	18.56	19.03
	6H	20.87	21.53	21.36	22.02	22.49	17.83	18.49	18.33	18.98	19.46
	8H	21.10	21.69	21.61	22.20	22.69	18.04	18.63	18.55	19.14	19.63
	12H	21.30	21.82	21.81	22.32	22.88	18.21	18.73	18.71	19.22	19.79
12H	4H	20.19	20.91	20.68	21.39	21.86	17.36	18.08	17.84	18.56	19.03
	6H	20.85	21.45	21.36	21.96	22.44	17.89	18.49	18.40	19.00	19.48
	8H	21.12	21.65	21.63	22.14	22.70	18.15	18.67	18.66	19.16	19.73