

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: P242697

Luminaire Tested: S124RDRP-S350D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242697
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S350D927-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

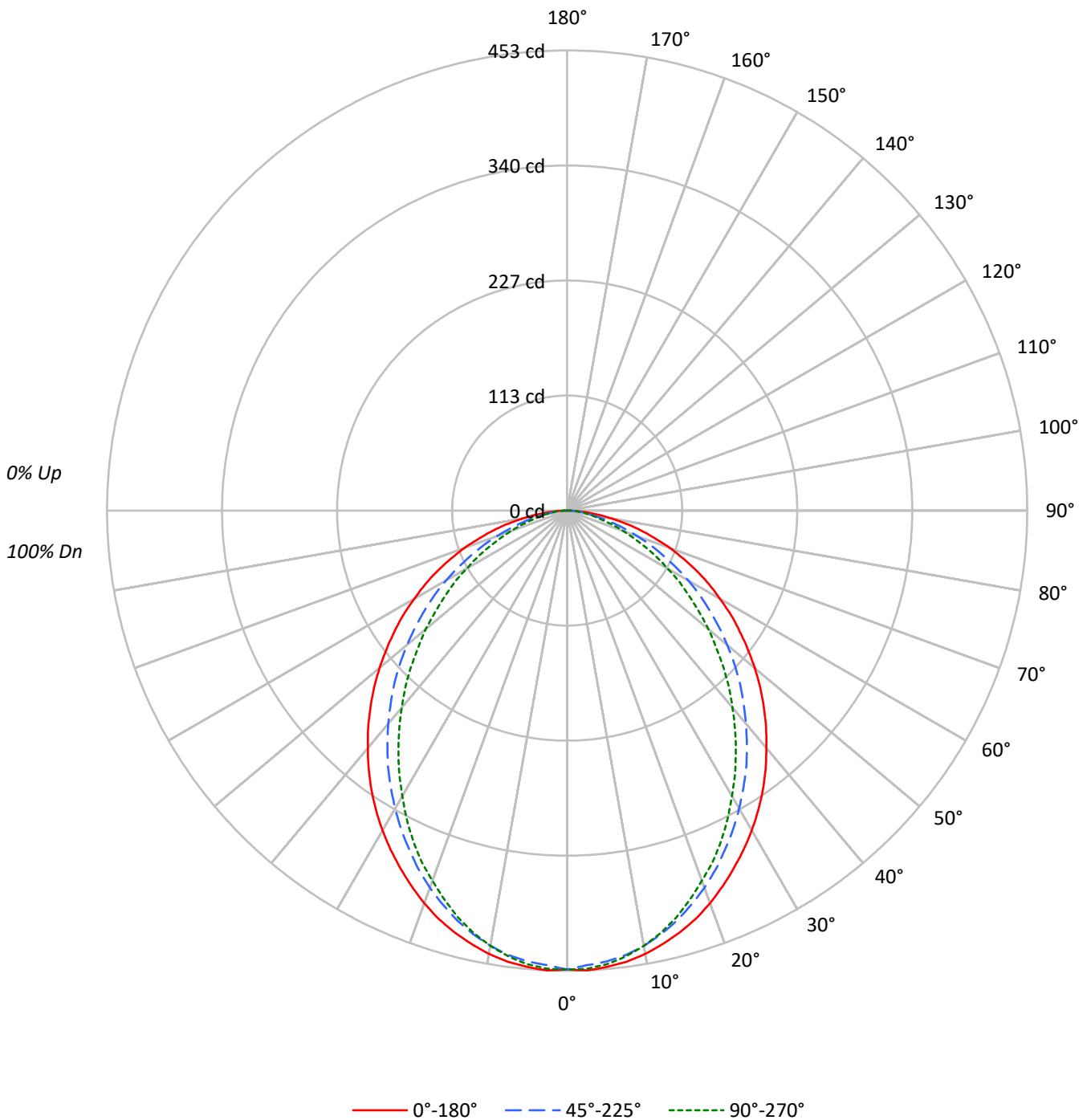
Lumens per Lamp: N/A
Luminaire Lumens: 1043.7 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85				85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72				72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62				62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54				54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47				47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41				41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37				37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33				33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30				30
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27				27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4015	4015	4015
5°	4024	3975	4000
10°	3999	3927	3927
15°	3953	3845	3816
20°	3891	3736	3667
25°	3809	3609	3518
30°	3731	3475	3330
35°	3645	3337	3141
40°	3540	3178	2938
45°	3443	3022	2730
50°	3334	2842	2511
55°	3216	2653	2273
60°	3086	2448	2028
65°	2968	2190	1790
70°	2796	1905	1520
75°	2579	1580	1236
80°	2247	1203	1131
85°	1907	1091	1020

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3443 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.5	4.1
10°-20°	118.4	11.3
20°-30°	171.0	16.4
30°-40°	193.8	18.6
40°-50°	187.1	17.9
50°-60°	155.6	14.9
60°-70°	107.4	10.3
70°-80°	54.2	5.2
80°-90°	13.8	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°	331.9	31.8
0°-40°	525.7	50.4
0°-60°	868.3	83.2
0°-90°	1043.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1043.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	452	452	452	452	452	
5°	451	450	446	449	448	43
15°	430	426	418	417	415	121
25°	388	382	368	362	359	179
35°	336	325	308	296	290	210
45°	274	261	240	223	217	211
55°	208	194	171	153	147	186
65°	141	126	104	89	85	139
75°	75	62	46	38	36	79
85°	19	12	11	10	10	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	451.7	451.7	451.7	451.7	451.7
2.5°	453.1	451.7	447.9	451.7	451.4
5°	451.0	449.7	445.5	449.0	448.3
7.5°	447.9	446.5	441.3	443.8	442.7
10°	443.1	441.3	435.1	436.5	435.1
12.5°	436.9	434.8	427.2	427.9	425.8
15°	429.6	426.5	417.8	417.1	414.7
17.5°	421.3	416.8	406.8	405.0	401.6
20°	411.3	406.8	395.0	392.2	387.7
22.5°	400.2	395.0	382.2	377.7	374.2
25°	388.4	382.2	368.0	362.1	358.7
27.5°	376.3	368.7	353.8	346.9	342.1
30°	363.5	354.9	338.6	330.0	324.4
32.5°	350.0	340.0	323.1	312.7	307.5
35°	335.9	324.8	307.5	295.7	289.5
37.5°	321.0	309.6	290.5	277.7	271.5
40°	305.1	293.7	273.9	259.4	253.2
42.5°	289.9	277.7	257.0	242.1	235.5
45°	273.9	261.1	240.4	223.4	217.2
47.5°	257.7	244.5	223.1	205.5	198.5
50°	241.1	227.6	205.5	188.2	181.6
52.5°	224.1	211.0	188.2	170.5	163.6
55°	207.5	193.7	171.2	153.2	146.7
57.5°	191.3	176.7	154.6	136.3	131.4
60°	173.6	159.8	137.7	119.7	114.1
62.5°	157.7	143.2	120.4	104.1	100.0
65°	141.1	126.2	104.1	89.2	85.1
67.5°	123.8	109.6	88.9	75.7	70.9
70°	107.6	93.0	73.3	61.9	58.5
72.5°	90.3	77.5	59.1	49.8	46.7
75°	75.1	62.3	46.0	38.0	36.0
77.5°	59.1	48.1	34.2	28.7	28.0
80°	43.9	33.9	23.5	22.5	22.1
82.5°	30.8	21.8	16.9	16.3	15.9
85°	18.7	11.8	10.7	10.0	10.0
87.5°	8.0	5.2	4.8	4.5	4.8
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	16.17	17.74	16.54	18.05	18.37	14.20	15.77	14.57	16.08	16.40
	3H	17.94	19.35	18.32	19.68	20.04	15.46	16.87	15.83	17.19	17.55
	4H	18.60	19.93	19.00	20.28	20.65	15.83	17.16	16.23	17.51	17.88
	6H	19.08	20.30	19.49	20.67	21.06	16.09	17.32	16.51	17.68	18.08
	8H	19.23	20.40	19.65	20.78	21.18	16.19	17.35	16.61	17.74	18.14
	12H	19.33	20.44	19.76	20.83	21.25	16.25	17.37	16.68	17.75	18.18
4H	2H	16.51	17.83	16.91	18.18	18.56	14.90	16.22	15.30	16.57	16.95
	3H	18.48	19.58	18.89	19.98	20.38	16.33	17.43	16.74	17.83	18.23
	4H	19.26	20.25	19.69	20.66	21.10	16.79	17.78	17.22	18.19	18.63
	6H	19.85	20.72	20.31	21.16	21.62	17.13	18.00	17.59	18.44	18.90
	8H	20.05	20.85	20.51	21.30	21.76	17.26	18.07	17.72	18.51	18.98
	12H	20.19	20.91	20.67	21.39	21.86	17.36	18.08	17.84	18.56	19.03
8H	4H	19.35	20.16	19.81	20.60	21.07	17.10	17.91	17.56	18.35	18.82
	6H	20.02	20.69	20.52	21.18	21.66	17.53	18.20	18.03	18.69	19.17
	8H	20.27	20.87	20.78	21.37	21.86	17.71	18.31	18.22	18.82	19.31
	12H	20.46	20.99	20.97	21.48	22.05	17.87	18.40	18.37	18.89	19.45
12H	4H	19.34	20.07	19.82	20.54	21.01	17.14	17.86	17.62	18.34	18.81
	6H	20.01	20.61	20.52	21.12	21.61	17.58	18.18	18.10	18.69	19.18
	8H	20.29	20.83	20.80	21.32	21.88	17.81	18.34	18.32	18.84	19.40