

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: P243562

Luminaire Tested: S124RDRP-H350D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243562
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-H350D830-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

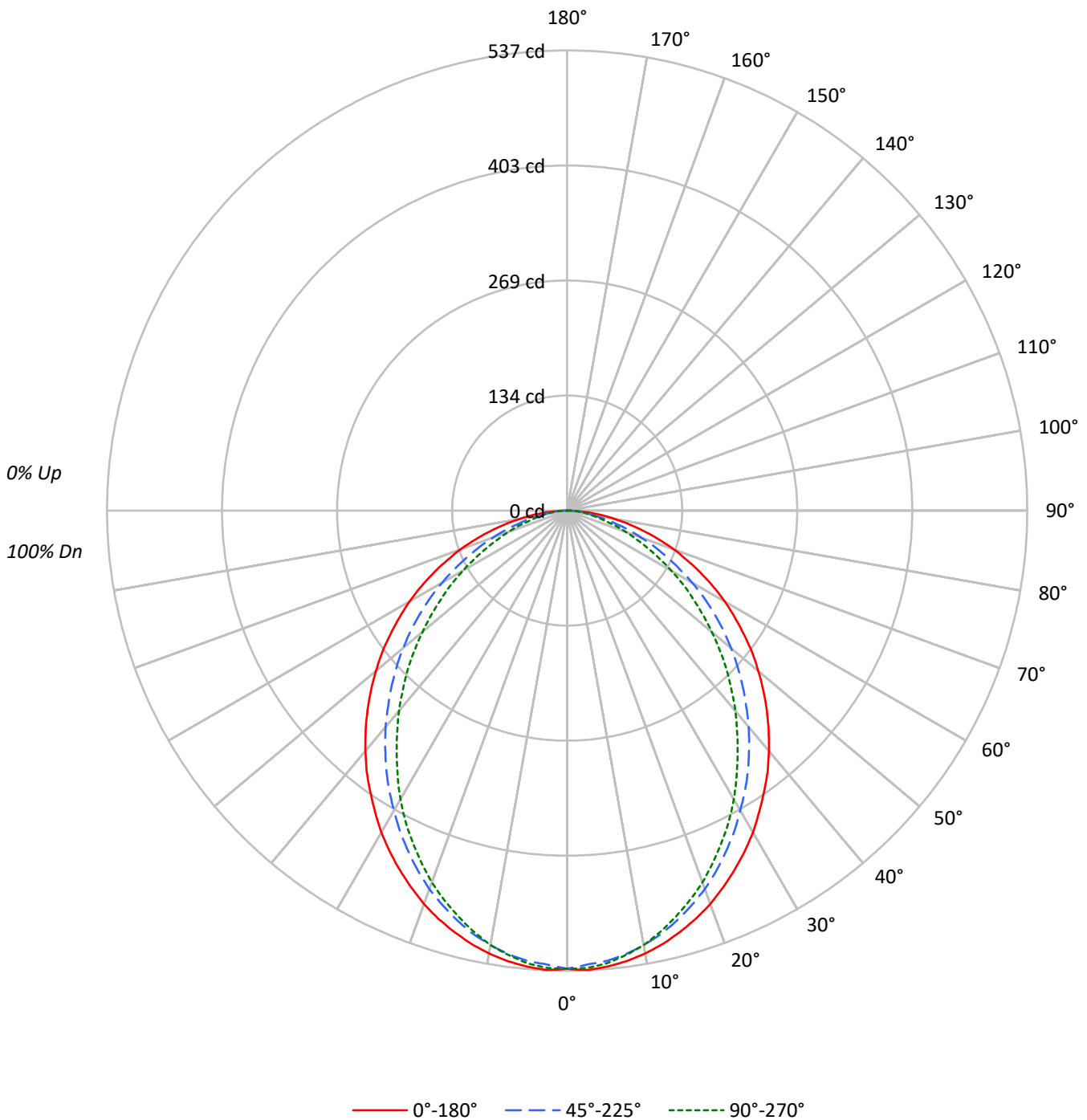
Lumens per Lamp: N/A
Luminaire Lumens: 1260.7 lumens
Efficiency: N/A
Efficacy: 112.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85																												
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72																												
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61																												
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41																												
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36																												
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34	33																												
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30																												
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4753	4753	4753
5°	4767	4708	4732
10°	4737	4648	4648
15°	4684	4557	4514
20°	4621	4445	4367
25°	4535	4304	4187
30°	4450	4147	3994
35°	4346	3994	3763
40°	4249	3823	3544
45°	4142	3641	3314
50°	4027	3454	3045
55°	3901	3240	2776
60°	3781	2996	2498
65°	3618	2705	2183
70°	3446	2388	1897
75°	3184	1992	1545
80°	2908	1556	1413
85°	2580	1489	1407

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4142 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.3	4.0
10°-20°	140.4	11.1
20°-30°	203.6	16.2
30°-40°	232.1	18.4
40°-50°	225.8	17.9
50°-60°	189.7	15.0
60°-70°	132.2	10.5
70°-80°	68.2	5.4
80°-90°	18.4	1.5
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°	394.3	31.3
0°-40°	626.4	49.7
0°-60°	1041.9	82.6
0°-90°	1260.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1260.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	535	535	535	535	535	
5°	534	533	528	532	530	51
15°	509	505	495	494	490	144
25°	462	454	439	432	427	213
35°	400	388	368	354	347	251
45°	330	314	290	271	264	254
55°	252	236	209	188	179	225
65°	172	156	129	110	104	170
75°	93	78	58	48	45	99
85°	25	16	15	14	14	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	534.7	534.7	534.7	534.7	534.7
2.5°	536.6	535.0	530.3	534.7	534.3
5°	534.3	532.7	527.6	531.5	530.3
7.5°	530.3	528.3	522.4	525.2	523.2
10°	524.8	522.8	514.9	516.9	514.9
12.5°	517.7	514.9	506.2	506.6	503.5
15°	509.0	505.1	495.2	494.4	490.5
17.5°	499.5	494.4	483.0	481.0	476.6
20°	488.5	482.2	469.9	465.6	461.7
22.5°	475.9	468.4	454.9	449.8	444.7
25°	462.4	453.8	438.8	432.5	426.9
27.5°	448.6	438.4	422.2	414.3	408.8
30°	433.6	421.8	404.0	395.0	389.1
32.5°	417.1	405.2	386.7	375.6	368.1
35°	400.5	388.3	368.1	354.3	346.8
37.5°	384.3	370.5	348.8	334.6	325.9
40°	366.2	351.6	329.5	313.3	305.4
42.5°	348.0	333.0	309.3	292.4	283.7
45°	329.5	313.7	289.6	271.1	263.6
47.5°	310.5	294.7	269.9	250.6	241.9
50°	291.2	275.4	249.8	228.5	220.2
52.5°	272.3	255.7	230.0	208.3	199.7
55°	251.7	235.6	209.1	187.8	179.1
57.5°	232.0	215.0	189.4	167.7	160.6
60°	212.7	195.7	168.5	147.6	140.5
62.5°	192.2	175.2	148.4	128.2	121.9
65°	172.0	155.5	128.6	110.1	103.8
67.5°	151.5	136.5	110.5	92.7	87.6
70°	132.6	115.6	91.9	76.5	73.0
72.5°	112.5	97.5	74.6	61.9	59.2
75°	92.7	78.5	58.0	48.5	45.0
77.5°	74.6	60.8	43.8	35.9	35.9
80°	56.8	44.6	30.4	28.4	27.6
82.5°	40.2	28.8	22.5	20.9	20.5
85°	25.3	16.2	14.6	13.8	13.8
87.5°	12.2	7.5	7.5	7.1	7.1
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	16.87	18.44	17.23	18.75	19.07	14.97	16.55	15.33	16.86	17.17
	3H	18.68	20.10	19.06	20.43	20.79	16.23	17.65	16.61	17.98	18.34
	4H	19.36	20.70	19.76	21.05	21.42	16.63	17.96	17.03	18.31	18.69
	6H	19.88	21.11	20.29	21.48	21.87	16.91	18.14	17.32	18.51	18.90
	8H	20.05	21.23	20.47	21.61	22.01	17.01	18.18	17.43	18.57	18.97
	12H	20.17	21.29	20.60	21.68	22.10	17.09	18.21	17.52	18.60	19.02
4H	2H	17.22	18.55	17.62	18.90	19.28	15.67	17.01	16.07	17.35	17.73
	3H	19.24	20.35	19.65	20.75	21.15	17.12	18.23	17.53	18.63	19.03
	4H	20.05	21.05	20.48	21.46	21.90	17.60	18.60	18.03	19.02	19.45
	6H	20.69	21.56	21.14	22.00	22.46	17.97	18.84	18.42	19.28	19.74
	8H	20.91	21.72	21.37	22.17	22.63	18.10	18.92	18.56	19.36	19.83
	12H	21.07	21.80	21.55	22.28	22.75	18.22	18.95	18.70	19.43	19.90
8H	4H	20.15	20.97	20.61	21.41	21.88	17.93	18.75	18.39	19.19	19.66
	6H	20.88	21.55	21.37	22.04	22.52	18.38	19.06	18.88	19.55	20.03
	8H	21.15	21.76	21.66	22.27	22.75	18.58	19.18	19.09	19.69	20.18
	12H	21.38	21.92	21.89	22.41	22.97	18.76	19.30	19.27	19.79	20.35
12H	4H	20.14	20.88	20.63	21.35	21.82	17.98	18.71	18.46	19.19	19.66
	6H	20.87	21.48	21.38	21.99	22.47	18.45	19.05	18.96	19.56	20.05
	8H	21.19	21.72	21.69	22.21	22.78	18.69	19.23	19.20	19.72	20.28