

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: P243577

Luminaire Tested: S124RDRP-H575D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243577
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-H575D930-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

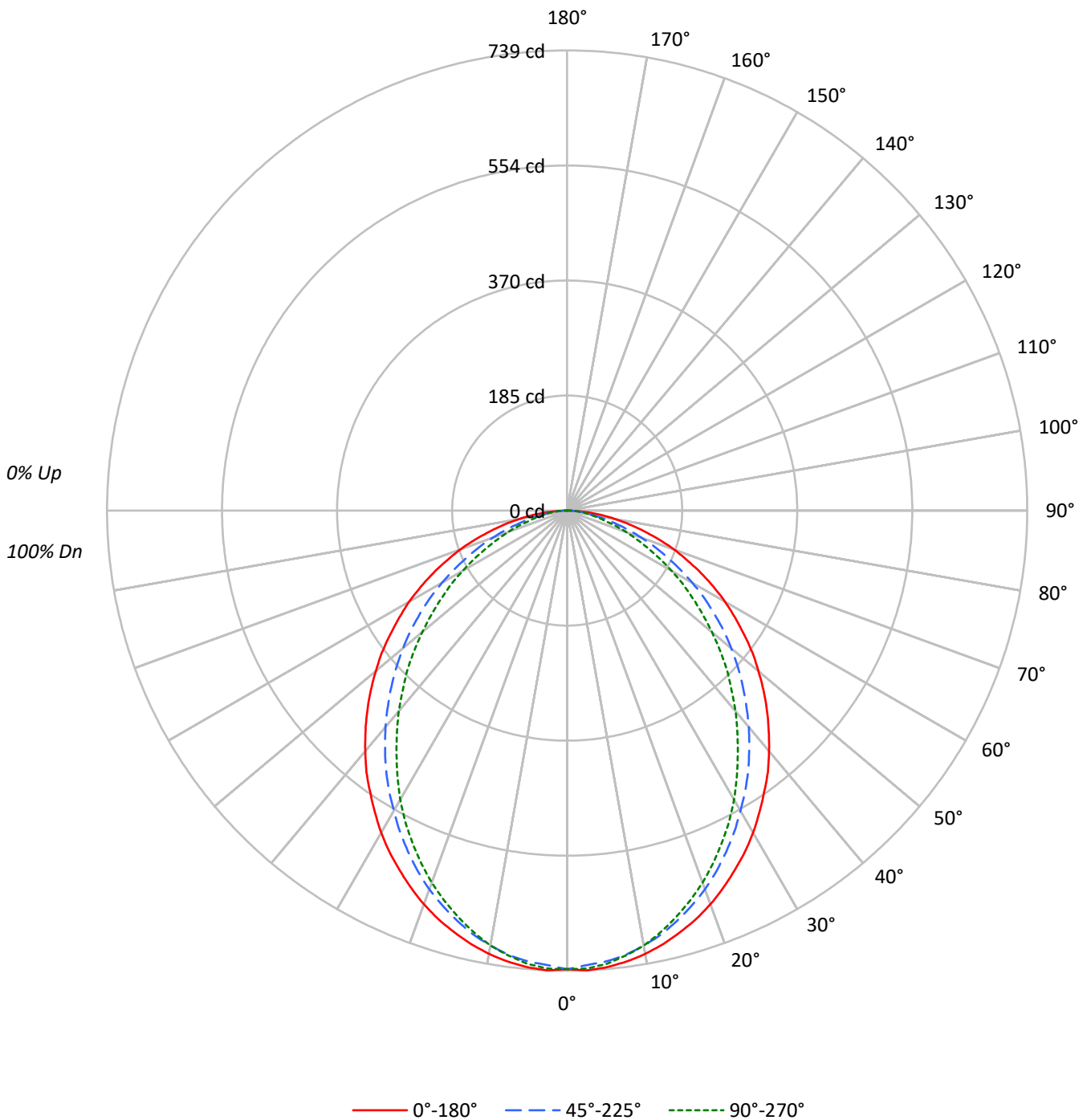
Lumens per Lamp: N/A
Luminaire Lumens: 1736.7 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): 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	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°	6547	6547	6547
5°	6567	6484	6518
10°	6525	6402	6402
15°	6453	6277	6217
20°	6365	6124	6015
25°	6248	5928	5768
30°	6132	5713	5500
35°	5987	5503	5185
40°	5853	5267	4882
45°	5706	5016	4564
50°	5547	4758	4194
55°	5374	4465	3825
60°	5209	4126	3440
65°	4985	3727	3008
70°	4746	3290	2615
75°	4386	2744	2129
80°	4008	2145	1945
85°	3549	2050	1938

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5706 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.3	4.0
10°-20°	193.4	11.1
20°-30°	280.5	16.2
30°-40°	319.7	18.4
40°-50°	311.1	17.9
50°-60°	261.3	15.0
60°-70°	182.1	10.5
70°-80°	94.0	5.4
80°-90°	25.4	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°	543.2	31.3
0°-40°	862.9	49.7
0°-60°	1435.3	82.6
0°-90°	1736.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1736.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	736	734	727	732	730	70
15°	701	696	682	681	676	198
25°	637	625	604	596	588	294
35°	552	535	507	488	478	345
45°	454	432	399	373	363	350
55°	347	324	288	259	247	310
65°	237	214	177	152	143	235
75°	128	108	80	67	62	136
85°	35	22	20	19	19	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	736.5	736.5	736.5	736.5	736.5
2.5°	739.2	737.0	730.5	736.5	736.0
5°	736.0	733.8	726.7	732.2	730.5
7.5°	730.5	727.8	719.7	723.5	720.7
10°	722.9	720.2	709.3	712.0	709.3
12.5°	713.1	709.3	697.4	697.9	693.6
15°	701.2	695.7	682.1	681.1	675.6
17.5°	688.1	681.1	665.3	662.6	656.6
20°	672.9	664.2	647.4	641.4	635.9
22.5°	655.5	645.2	626.7	619.6	612.6
25°	637.0	625.1	604.4	595.7	588.1
27.5°	618.0	603.9	581.6	570.7	563.1
30°	597.4	581.0	556.6	544.1	535.9
32.5°	574.5	558.2	532.7	517.5	507.1
35°	551.7	534.8	507.1	488.1	477.8
37.5°	529.4	510.4	480.5	460.9	449.0
40°	504.4	484.3	453.9	431.6	420.7
42.5°	479.4	458.8	426.1	402.8	390.8
45°	453.9	432.1	399.0	373.4	363.1
47.5°	427.8	406.0	371.8	345.2	333.2
50°	401.1	379.4	344.1	314.7	303.3
52.5°	375.0	352.2	316.9	287.0	275.0
55°	346.8	324.5	288.1	258.7	246.8
57.5°	319.6	296.2	260.9	231.0	221.2
60°	293.0	269.6	232.1	203.3	193.5
62.5°	264.7	241.3	204.4	176.7	168.0
65°	237.0	214.2	177.2	151.6	143.0
67.5°	208.7	188.1	152.2	127.7	120.7
70°	182.6	159.3	126.6	105.4	100.6
72.5°	154.9	134.3	102.7	85.3	81.5
75°	127.7	108.2	79.9	66.9	62.0
77.5°	102.7	83.7	60.3	49.5	49.5
80°	78.3	61.4	41.9	39.1	38.0
82.5°	55.4	39.7	31.0	28.8	28.3
85°	34.8	22.3	20.1	19.0	19.0
87.5°	16.8	10.3	10.3	9.8	9.8
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	17.98	19.55	18.34	19.87	20.18	16.08	17.66	16.45	17.97	18.29
	3H	19.79	21.21	20.17	21.54	21.90	17.35	18.76	17.72	19.09	19.45
	4H	20.48	21.81	20.88	22.16	22.54	17.74	19.07	18.14	19.42	19.80
	6H	20.99	22.23	21.40	22.59	22.98	18.02	19.25	18.43	19.62	20.01
	8H	21.16	22.34	21.59	22.73	23.13	18.12	19.30	18.55	19.69	20.09
	12H	21.28	22.41	21.71	22.79	23.22	18.20	19.33	18.63	19.71	20.14
4H	2H	18.33	19.66	18.73	20.01	20.39	16.78	18.12	17.18	18.47	18.84
	3H	20.35	21.46	20.76	21.86	22.26	18.24	19.35	18.65	19.74	20.15
	4H	21.16	22.16	21.59	22.58	23.01	18.71	19.72	19.15	20.13	20.57
	6H	21.80	22.67	22.26	23.12	23.57	19.08	19.95	19.54	20.39	20.85
	8H	22.02	22.84	22.48	23.28	23.74	19.22	20.03	19.68	20.48	20.94
	12H	22.18	22.92	22.67	23.39	23.86	19.33	20.07	19.82	20.54	21.01
8H	4H	21.27	22.08	21.73	22.53	22.99	19.05	19.86	19.51	20.31	20.77
	6H	21.99	22.67	22.49	23.16	23.63	19.50	20.17	19.99	20.66	21.14
	8H	22.26	22.87	22.78	23.38	23.87	19.69	20.30	20.20	20.81	21.29
	12H	22.49	23.03	23.00	23.52	24.08	19.88	20.41	20.38	20.90	21.47
12H	4H	21.26	21.99	21.74	22.47	22.94	19.09	19.82	19.57	20.30	20.77
	6H	21.98	22.59	22.50	23.10	23.59	19.56	20.17	20.07	20.68	21.16
	8H	22.30	22.84	22.81	23.33	23.89	19.81	20.34	20.32	20.84	21.40