

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: P243566

Luminaire Tested: S124RDRP-H1195D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243566
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-H1195D830-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

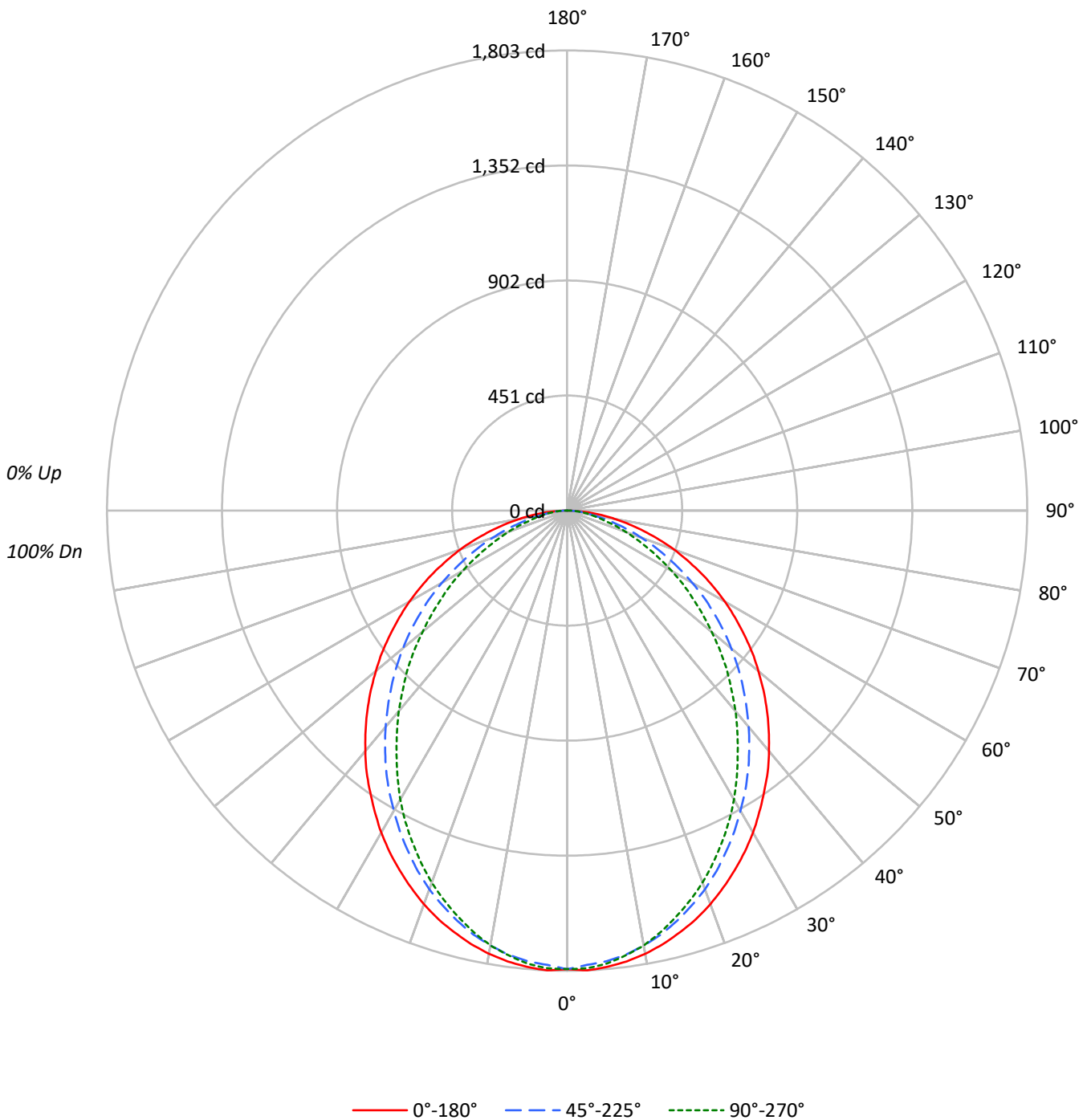
Lumens per Lamp: N/A
Luminaire Lumens: 4236.2 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 37.7
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61					61			
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36					36			
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34	33					33			
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30					30			
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15969	15969	15969
5°	16017	15817	15900
10°	15916	15617	15617
15°	15739	15312	15166
20°	15526	14936	14673
25°	15239	14460	14069
30°	14955	13934	13417
35°	14603	13423	12646
40°	14276	12845	11908
45°	13916	12233	11133
50°	13530	11605	10230
55°	13109	10890	9328
60°	12704	10064	8391
65°	12157	9090	7334
70°	11578	8028	6375
75°	10702	6694	5189
80°	9772	5226	4750
85°	8659	5008	4732

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13916 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.0	4.0
10°-20°	471.8	11.1
20°-30°	684.2	16.2
30°-40°	779.8	18.4
40°-50°	758.7	17.9
50°-60°	637.4	15.0
60°-70°	444.0	10.5
70°-80°	229.3	5.4
80°-90°	62.0	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°	1324.9	31.3
0°-40°	2104.8	49.7
0°-60°	3500.9	82.6
0°-90°	4236.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4236.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1796	1796	1796	1796	1796	
5°	1795	1790	1773	1786	1782	170
15°	1710	1697	1664	1661	1648	482
25°	1554	1525	1474	1453	1434	716
35°	1346	1305	1237	1191	1165	843
45°	1107	1054	973	911	886	854
55°	846	792	703	631	602	757
65°	578	522	432	370	349	572
75°	312	264	195	163	151	332
85°	85	54	49	46	46	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1796.5	1796.5	1796.5	1796.5	1796.5
2.5°	1803.1	1797.8	1781.9	1796.5	1795.1
5°	1795.1	1789.8	1772.6	1785.8	1781.9
7.5°	1781.9	1775.2	1755.4	1764.6	1758.0
10°	1763.3	1756.7	1730.2	1736.8	1730.2
12.5°	1739.4	1730.2	1701.0	1702.3	1691.7
15°	1710.3	1697.0	1663.9	1661.2	1648.0
17.5°	1678.5	1661.2	1622.8	1616.1	1601.6
20°	1641.3	1620.1	1579.0	1564.4	1551.2
22.5°	1598.9	1573.7	1528.6	1511.4	1494.2
25°	1553.8	1524.7	1474.3	1453.1	1434.5
27.5°	1507.4	1473.0	1418.6	1392.1	1373.5
30°	1457.0	1417.3	1357.6	1327.1	1307.2
32.5°	1401.4	1361.6	1299.3	1262.2	1237.0
35°	1345.7	1304.6	1237.0	1190.6	1165.4
37.5°	1291.3	1244.9	1172.0	1124.3	1095.1
40°	1230.3	1181.3	1107.0	1052.7	1026.2
42.5°	1169.4	1119.0	1039.4	982.4	953.2
45°	1107.0	1054.0	973.1	910.8	885.6
47.5°	1043.4	990.4	906.8	841.9	812.7
50°	978.4	925.4	839.2	767.6	739.8
52.5°	914.8	859.1	772.9	700.0	670.9
55°	845.9	791.5	702.7	631.1	601.9
57.5°	779.6	722.6	636.4	563.5	539.6
60°	714.6	657.6	566.1	495.8	472.0
62.5°	645.7	588.7	498.5	430.9	409.7
65°	578.0	522.4	432.2	369.9	348.7
67.5°	509.1	458.7	371.2	311.6	294.3
70°	445.5	388.5	308.9	257.2	245.3
72.5°	377.9	327.5	250.6	208.1	198.9
75°	311.6	263.8	194.9	163.1	151.1
77.5°	250.6	204.2	147.2	120.6	120.6
80°	190.9	149.8	102.1	95.5	92.8
82.5°	135.2	96.8	75.6	70.3	68.9
85°	84.9	54.4	49.1	46.4	46.4
87.5°	41.1	25.2	25.2	23.9	23.9
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	21.08	22.65	21.44	22.97	23.28	19.18	20.76	19.55	21.07	21.38
	3H	22.89	24.31	23.27	24.64	25.00	20.44	21.86	20.82	22.19	22.55
	4H	23.58	24.91	23.98	25.26	25.63	20.84	22.17	21.24	22.52	22.90
	6H	24.09	25.32	24.50	25.69	26.08	21.12	22.35	21.53	22.72	23.11
	8H	24.26	25.44	24.69	25.83	26.23	21.22	22.39	21.64	22.78	23.18
	12H	24.38	25.51	24.81	25.89	26.32	21.30	22.42	21.73	22.81	23.24
4H	2H	21.43	22.76	21.83	23.11	23.49	19.88	21.22	20.28	21.56	21.94
	3H	23.45	24.56	23.86	24.96	25.36	21.33	22.44	21.74	22.84	23.24
	4H	24.26	25.26	24.69	25.67	26.11	21.81	22.81	22.24	23.23	23.67
	6H	24.90	25.77	25.36	26.21	26.67	22.18	23.05	22.63	23.49	23.95
	8H	25.12	25.93	25.58	26.38	26.84	22.31	23.13	22.78	23.57	24.04
	12H	25.28	26.01	25.76	26.49	26.96	22.43	23.16	22.91	23.64	24.11
8H	4H	24.36	25.18	24.83	25.62	26.09	22.14	22.96	22.61	23.40	23.87
	6H	25.09	25.77	25.58	26.25	26.73	22.60	23.27	23.09	23.76	24.24
	8H	25.36	25.97	25.87	26.48	26.96	22.79	23.40	23.30	23.90	24.39
	12H	25.59	26.13	26.10	26.62	27.18	22.97	23.51	23.48	24.00	24.56
12H	4H	24.36	25.09	24.84	25.56	26.03	22.19	22.92	22.67	23.40	23.87
	6H	25.08	25.69	25.59	26.20	26.69	22.66	23.27	23.17	23.77	24.26
	8H	25.40	25.93	25.91	26.43	26.99	22.91	23.44	23.41	23.93	24.50