

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: P243590

Luminaire Tested: S124RDRP-H1195D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243590
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-H1195D940-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

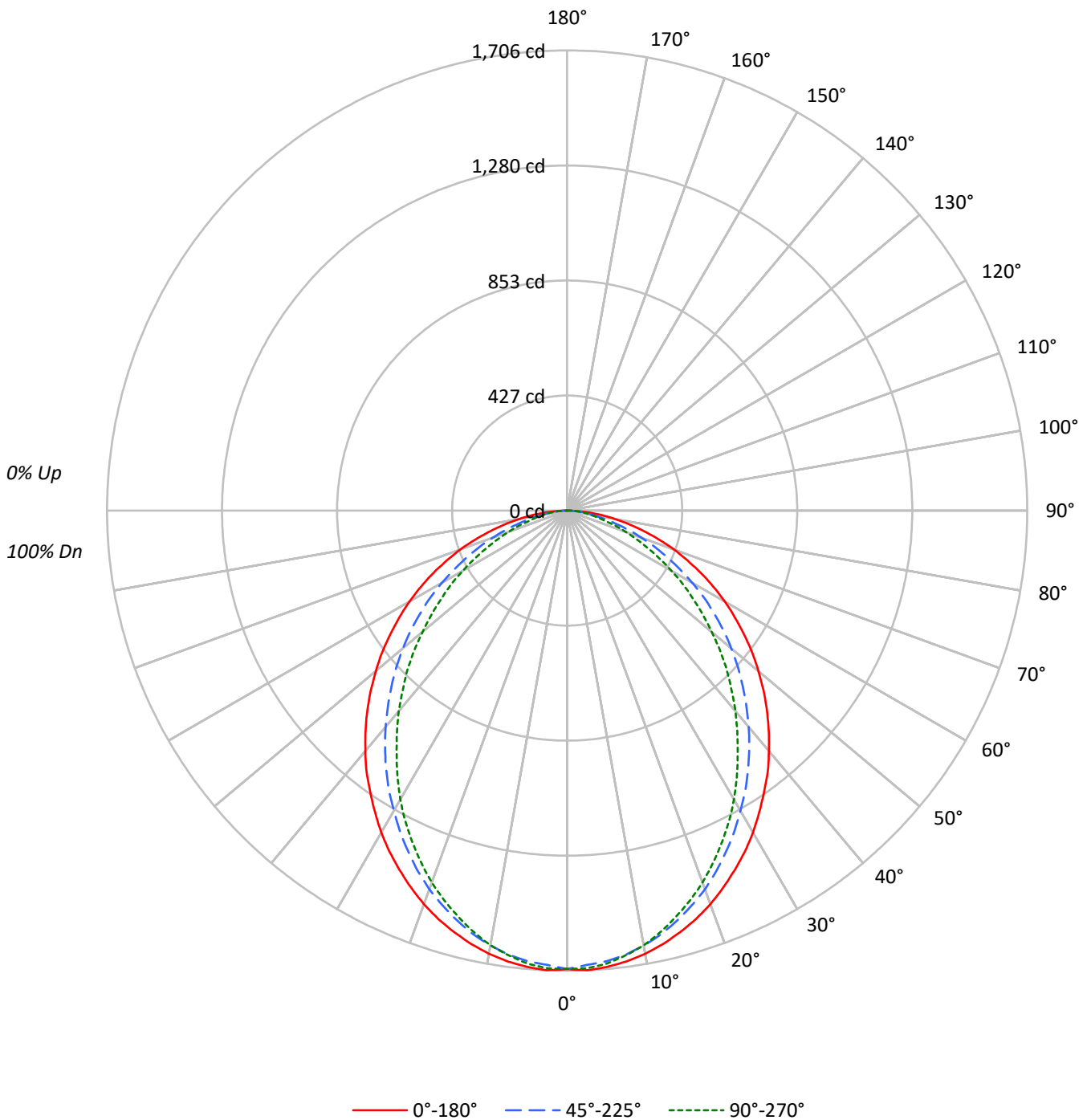
Lumens per Lamp: N/A
Luminaire Lumens: 4007.7 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (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	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°	15108	15108	15108
5°	15154	14964	15042
10°	15057	14775	14775
15°	14890	14486	14348
20°	14689	14131	13882
25°	14418	13680	13310
30°	14149	13183	12694
35°	13815	12699	11964
40°	13507	12153	11265
45°	13165	11574	10533
50°	12801	10980	9679
55°	12401	10303	8824
60°	12020	9522	7938
65°	11503	8600	6939
70°	10952	7597	6030
75°	10125	6333	4911
80°	9245	4945	4494
85°	8190	4732	4477

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13165 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.8	4.0
10°-20°	446.4	11.1
20°-30°	647.3	16.2
30°-40°	737.8	18.4
40°-50°	717.8	17.9
50°-60°	603.0	15.0
60°-70°	420.1	10.5
70°-80°	216.9	5.4
80°-90°	58.7	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°	1253.5	31.3
0°-40°	1991.3	49.7
0°-60°	3312.1	82.6
0°-90°	4007.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4007.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1700	1700	1700	1700	1700	
5°	1698	1693	1677	1690	1686	161
15°	1618	1606	1574	1572	1559	456
25°	1470	1442	1395	1375	1357	677
35°	1273	1234	1170	1126	1102	797
45°	1047	997	921	862	838	808
55°	800	749	665	597	569	716
65°	547	494	409	350	330	541
75°	295	250	184	154	143	314
85°	80	51	46	44	44	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1699.6	1699.6	1699.6	1699.6	1699.6
2.5°	1705.8	1700.8	1685.8	1699.6	1698.3
5°	1698.3	1693.3	1677.0	1689.5	1685.8
7.5°	1685.8	1679.5	1660.7	1669.5	1663.2
10°	1668.2	1661.9	1636.9	1643.1	1636.9
12.5°	1645.6	1636.9	1609.3	1610.5	1600.5
15°	1618.0	1605.5	1574.1	1571.6	1559.1
17.5°	1587.9	1571.6	1535.3	1529.0	1515.2
20°	1552.8	1532.7	1493.9	1480.1	1467.5
22.5°	1512.7	1488.8	1446.2	1429.9	1413.6
25°	1470.0	1442.4	1394.8	1374.7	1357.1
27.5°	1426.1	1393.5	1342.1	1317.0	1299.4
30°	1378.5	1340.8	1284.4	1255.5	1236.7
32.5°	1325.8	1288.2	1229.2	1194.1	1170.3
35°	1273.1	1234.2	1170.3	1126.4	1102.5
37.5°	1221.7	1177.8	1108.8	1063.6	1036.0
40°	1164.0	1117.6	1047.3	995.9	970.8
42.5°	1106.3	1058.6	983.4	929.4	901.8
45°	1047.3	997.2	920.7	861.7	837.9
47.5°	987.1	937.0	857.9	796.5	768.9
50°	925.7	875.5	794.0	726.2	699.9
52.5°	865.5	812.8	731.3	662.3	634.7
55°	800.2	748.8	664.8	597.0	569.4
57.5°	737.5	683.6	602.1	533.1	510.5
60°	676.1	622.1	535.6	469.1	446.5
62.5°	610.8	556.9	471.6	407.6	387.6
65°	546.9	494.2	408.9	349.9	329.9
67.5°	481.6	434.0	351.2	294.8	278.5
70°	421.4	367.5	292.3	243.3	232.0
72.5°	357.5	309.8	237.1	196.9	188.1
75°	294.8	249.6	184.4	154.3	143.0
77.5°	237.1	193.2	139.2	114.1	114.1
80°	180.6	141.7	96.6	90.3	87.8
82.5°	127.9	91.6	71.5	66.5	65.2
85°	80.3	51.4	46.4	43.9	43.9
87.5°	38.9	23.8	23.8	22.6	22.6
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	20.88	22.46	21.25	22.77	23.09	18.99	20.56	19.35	20.88	21.19
	3H	22.70	24.12	23.08	24.45	24.81	20.25	21.67	20.63	22.00	22.36
	4H	23.38	24.72	23.78	25.07	25.44	20.65	21.98	21.05	22.33	22.71
	6H	23.90	25.13	24.31	25.50	25.89	20.92	22.16	21.34	22.52	22.92
	8H	24.07	25.24	24.49	25.63	26.03	21.03	22.20	21.45	22.59	22.99
	12H	24.19	25.31	24.62	25.69	26.12	21.11	22.23	21.54	22.61	23.04
4H	2H	21.24	22.57	21.64	22.92	23.30	19.69	21.02	20.09	21.37	21.75
	3H	23.26	24.37	23.67	24.76	25.17	21.14	22.25	21.55	22.65	23.05
	4H	24.06	25.07	24.50	25.48	25.92	21.62	22.62	22.05	23.04	23.47
	6H	24.71	25.58	25.16	26.02	26.48	21.99	22.86	22.44	23.30	23.76
	8H	24.92	25.74	25.39	26.18	26.65	22.12	22.94	22.58	23.38	23.85
	12H	25.09	25.82	25.57	26.30	26.77	22.24	22.97	22.72	23.45	23.92
8H	4H	24.17	24.99	24.63	25.43	25.90	21.95	22.77	22.41	23.21	23.68
	6H	24.90	25.57	25.39	26.06	26.54	22.40	23.08	22.90	23.57	24.05
	8H	25.17	25.78	25.68	26.28	26.77	22.60	23.20	23.11	23.71	24.20
	12H	25.40	25.93	25.91	26.43	26.99	22.78	23.32	23.29	23.81	24.37
12H	4H	24.16	24.90	24.64	25.37	25.84	22.00	22.73	22.48	23.21	23.68
	6H	24.89	25.50	25.40	26.01	26.49	22.47	23.07	22.98	23.58	24.07
	8H	25.20	25.74	25.71	26.23	26.80	22.71	23.25	23.22	23.74	24.30