

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: P243563

Luminaire Tested: S124RDRP-H575D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243563
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-H575D830-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

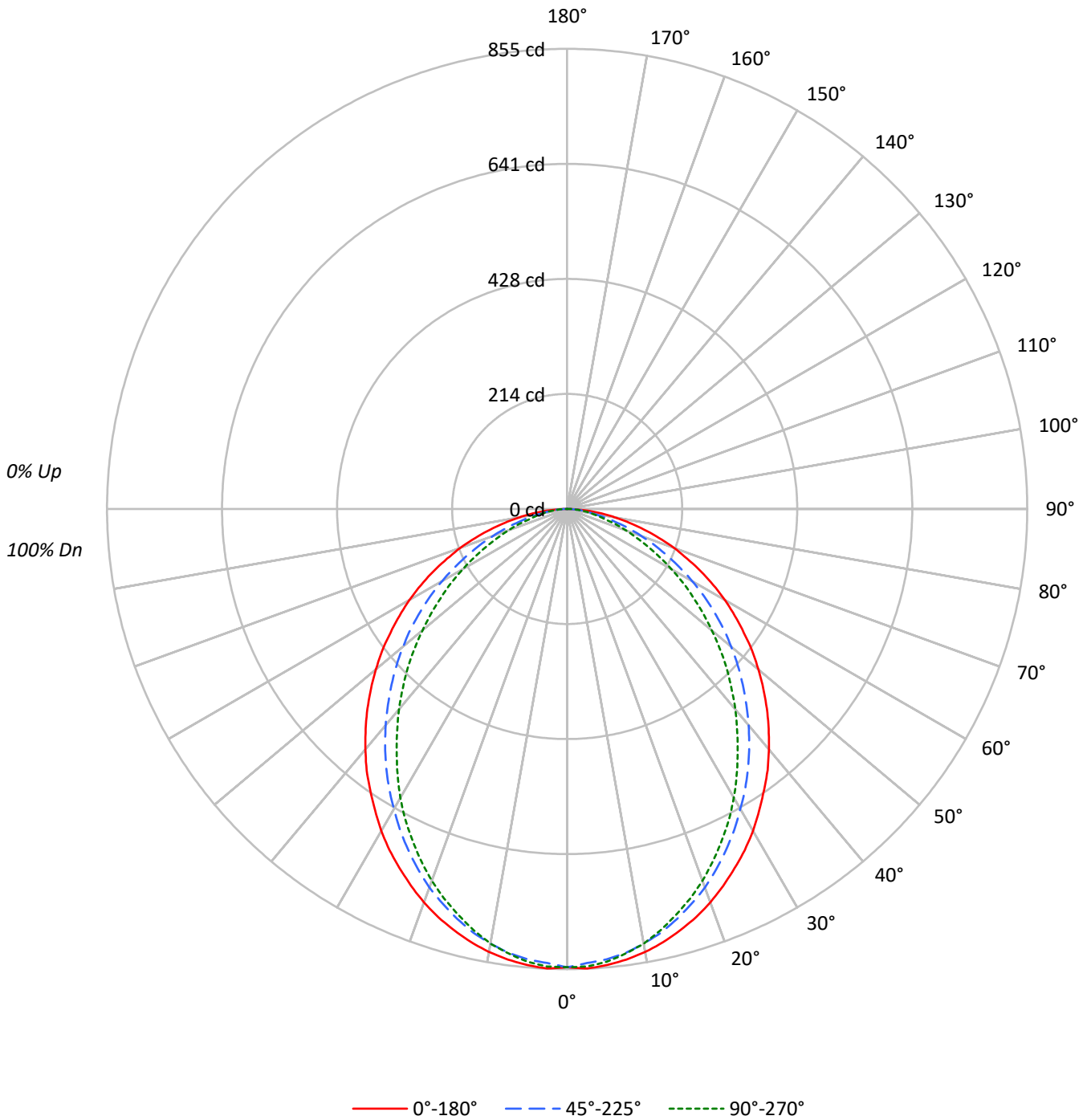
Lumens per Lamp: N/A
Luminaire Lumens: 2007.8 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	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°	7568	7568	7568
5°	7592	7496	7535
10°	7543	7401	7401
15°	7460	7257	7188
20°	7358	7079	6955
25°	7223	6854	6668
30°	7088	6605	6360
35°	6921	6362	5993
40°	6766	6088	5644
45°	6596	5798	5277
50°	6412	5501	4848
55°	6213	5161	4421
60°	6021	4770	3977
65°	5763	4310	3477
70°	5486	3805	3020
75°	5073	3173	2459
80°	4633	2478	2252
85°	4100	2366	2244

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6596 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.1	4.0
10°-20°	223.6	11.1
20°-30°	324.3	16.2
30°-40°	369.6	18.4
40°-50°	359.6	17.9
50°-60°	302.1	15.0
60°-70°	210.5	10.5
70°-80°	108.7	5.4
80°-90°	29.4	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°	628.0	31.3
0°-40°	997.6	49.7
0°-60°	1659.3	82.6
0°-90°	2007.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2007.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	851	851	851	851	851	
5°	851	848	840	846	844	81
15°	811	804	789	787	781	229
25°	736	723	699	689	680	339
35°	638	618	586	564	552	399
45°	525	500	461	432	420	405
55°	401	375	333	299	285	359
65°	274	248	205	175	165	271
75°	148	125	92	77	72	157
85°	40	26	23	22	22	46
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	851.4	851.4	851.4	851.4	851.4
2.5°	854.6	852.1	844.5	851.4	850.8
5°	850.8	848.3	840.1	846.4	844.5
7.5°	844.5	841.4	832.0	836.4	833.2
10°	835.7	832.6	820.0	823.2	820.0
12.5°	824.4	820.0	806.2	806.8	801.8
15°	810.6	804.3	788.6	787.4	781.1
17.5°	795.5	787.4	769.1	766.0	759.1
20°	777.9	767.9	748.4	741.5	735.2
22.5°	757.8	745.9	724.5	716.3	708.2
25°	736.5	722.6	698.8	688.7	679.9
27.5°	714.5	698.1	672.4	659.8	651.0
30°	690.6	671.7	643.5	629.0	619.6
32.5°	664.2	645.3	615.8	598.2	586.3
35°	637.8	618.3	586.3	564.3	552.3
37.5°	612.0	590.0	555.5	532.9	519.0
40°	583.1	559.9	524.7	498.9	486.4
42.5°	554.2	530.3	492.6	465.6	451.8
45°	524.7	499.6	461.2	431.7	419.8
47.5°	494.5	469.4	429.8	399.0	385.2
50°	463.7	438.6	397.8	363.8	350.6
52.5°	433.6	407.2	366.3	331.8	318.0
55°	400.9	375.1	333.0	299.1	285.3
57.5°	369.5	342.5	301.6	267.1	255.7
60°	338.7	311.7	268.3	235.0	223.7
62.5°	306.0	279.0	236.3	204.2	194.2
65°	274.0	247.6	204.9	175.3	165.3
67.5°	241.3	217.4	175.9	147.7	139.5
70°	211.1	184.1	146.4	121.9	116.2
72.5°	179.1	155.2	118.8	98.7	94.3
75°	147.7	125.0	92.4	77.3	71.6
77.5°	118.8	96.8	69.7	57.2	57.2
80°	90.5	71.0	48.4	45.2	44.0
82.5°	64.1	45.9	35.8	33.3	32.7
85°	40.2	25.8	23.2	22.0	22.0
87.5°	19.5	11.9	11.9	11.3	11.3
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	18.48	20.06	18.85	20.37	20.69	16.59	18.16	16.95	18.48	18.79
	3H	20.30	21.72	20.68	22.04	22.41	17.85	19.27	18.23	19.60	19.96
	4H	20.98	22.32	21.38	22.66	23.04	18.25	19.58	18.64	19.93	20.30
	6H	21.50	22.73	21.91	23.10	23.49	18.52	19.76	18.94	20.12	20.51
	8H	21.67	22.84	22.09	23.23	23.63	18.63	19.80	19.05	20.19	20.59
	12H	21.79	22.91	22.22	23.29	23.72	18.71	19.83	19.13	20.21	20.64
4H	2H	18.84	20.17	19.24	20.52	20.89	17.29	18.62	17.69	18.97	19.35
	3H	20.85	21.97	21.26	22.36	22.76	18.74	19.85	19.15	20.25	20.65
	4H	21.66	22.67	22.10	23.08	23.52	19.22	20.22	19.65	20.64	21.07
	6H	22.31	23.18	22.76	23.62	24.08	19.58	20.46	20.04	20.90	21.36
	8H	22.52	23.34	22.98	23.78	24.25	19.72	20.54	20.18	20.98	21.45
	12H	22.69	23.42	23.17	23.90	24.37	19.84	20.57	20.32	21.05	21.52
8H	4H	21.77	22.59	22.23	23.03	23.50	19.55	20.37	20.01	20.81	21.28
	6H	22.49	23.17	22.99	23.66	24.14	20.00	20.68	20.50	21.17	21.64
	8H	22.77	23.38	23.28	23.88	24.37	20.20	20.80	20.71	21.31	21.80
	12H	23.00	23.53	23.50	24.02	24.59	20.38	20.92	20.89	21.41	21.97
12H	4H	21.76	22.49	22.24	22.97	23.44	19.60	20.33	20.08	20.80	21.27
	6H	22.49	23.10	23.00	23.60	24.09	20.06	20.67	20.58	21.18	21.67
	8H	22.80	23.34	23.31	23.83	24.39	20.31	20.85	20.82	21.34	21.90