

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: P243460

Luminaire Tested: S124DRP-H575D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243460  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-H575D830-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

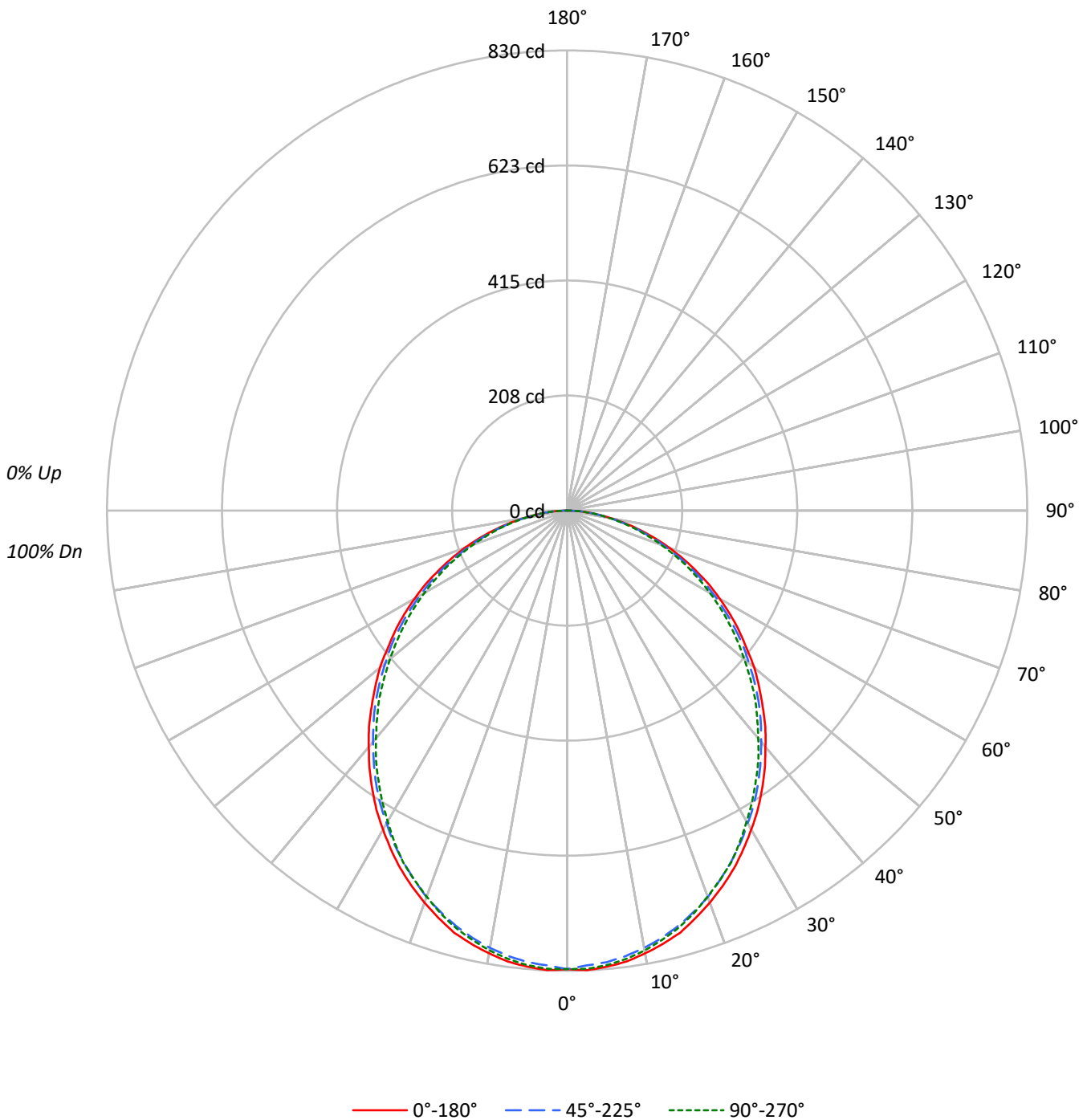
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2129.3 lumens  
Efficiency: N/A  
Efficacy: 123.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
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 (A<sub>in</sub>): 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	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70					70			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60					60			
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51					51			
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44					44			
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25					25			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7352	7352	7352
5°	7369	7296	7344
10°	7320	7229	7271
15°	7252	7135	7166
20°	7117	7016	7009
25°	6983	6859	6864
30°	6818	6687	6645
35°	6653	6522	6441
40°	6459	6318	6224
45°	6269	6142	6024
50°	6096	5919	5771
55°	5872	5715	5539
60°	5648	5456	5289
65°	5378	5195	5025
70°	5089	4863	4704
75°	4691	4506	4369
80°	4136	4064	3962
85°	3641	3641	3570

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6269 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.0	3.7
10°-20°	219.9	10.3
20°-30°	323.8	15.2
30°-40°	376.7	17.7
40°-50°	376.9	17.7
50°-60°	329.6	15.5
60°-70°	244.8	11.5
70°-80°	139.5	6.5
80°-90°	40.2	1.9
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°	621.6	29.2
0°-40°	998.4	46.9
0°-60°	1704.9	80.1
0°-90°	2129.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2129.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	826	824	818	824	823	78
15°	788	784	775	780	779	222
25°	712	709	699	701	700	328
35°	613	608	601	596	594	383
45°	499	497	489	481	479	385
55°	379	376	369	361	357	339
65°	256	254	247	242	239	254
75°	137	134	131	128	127	145
85°	36	35	36	34	35	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	827.1	827.1	827.1	827.1	827.1
2.5°	829.8	827.8	821.1	827.8	827.1
5°	825.8	824.4	817.7	823.8	823.1
7.5°	820.4	817.7	810.3	816.4	815.7
10°	811.0	809.0	800.9	806.9	805.6
12.5°	800.2	798.2	789.4	794.2	792.8
15°	788.1	784.1	775.3	780.0	778.7
17.5°	770.6	767.9	759.2	763.2	761.2
20°	752.4	749.1	741.7	742.3	741.0
22.5°	732.9	729.5	720.8	723.5	720.8
25°	712.0	708.7	699.3	701.3	699.9
27.5°	688.5	685.1	676.4	677.0	674.4
30°	664.3	660.2	651.5	650.8	647.4
32.5°	640.0	636.0	627.2	624.6	621.2
35°	613.1	607.7	601.0	595.6	593.6
37.5°	585.5	582.8	572.7	569.4	566.7
40°	556.6	553.9	544.5	539.8	536.4
42.5°	529.0	525.6	516.9	510.1	507.4
45°	498.7	496.7	488.6	481.2	479.2
47.5°	469.1	468.4	458.3	450.9	447.6
50°	440.8	436.8	428.0	421.3	417.3
52.5°	407.8	407.2	399.8	391.0	387.7
55°	378.9	376.2	368.8	360.7	357.4
57.5°	348.6	347.3	337.9	331.1	327.8
60°	317.7	315.0	306.9	300.8	297.5
62.5°	288.0	284.7	277.3	271.2	267.9
65°	255.7	253.7	247.0	241.6	238.9
67.5°	225.5	222.8	216.0	211.3	208.6
70°	195.8	191.8	187.1	183.1	181.0
72.5°	166.2	162.9	158.8	156.1	153.4
75°	136.6	133.9	131.2	128.5	127.2
77.5°	108.4	105.7	104.3	103.6	102.3
80°	80.8	79.4	79.4	78.7	77.4
82.5°	57.2	55.9	55.9	55.9	55.2
85°	35.7	35.0	35.7	34.3	35.0
87.5°	16.8	16.8	17.5	16.8	17.5
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	18.23	19.84	18.59	20.16	20.47	17.88	19.50	18.25	19.81	20.12
	3H	19.98	21.44	20.36	21.77	22.13	19.59	21.05	19.97	21.38	21.74
	4H	20.64	22.01	21.04	22.36	22.74	20.24	21.62	20.64	21.96	22.34
	6H	21.11	22.39	21.53	22.75	23.14	20.73	22.00	21.14	22.37	22.76
	8H	21.27	22.48	21.69	22.87	23.27	20.89	22.11	21.32	22.50	22.90
	12H	21.37	22.54	21.80	22.92	23.35	21.00	22.17	21.43	22.55	22.98
4H	2H	18.80	20.18	19.20	20.52	20.90	18.53	19.90	18.92	20.25	20.62
	3H	20.78	21.93	21.19	22.32	22.72	20.46	21.61	20.87	22.01	22.41
	4H	21.56	22.60	21.99	23.02	23.45	21.23	22.27	21.66	22.69	23.12
	6H	22.16	23.07	22.62	23.51	23.97	21.85	22.76	22.30	23.20	23.66
	8H	22.36	23.22	22.82	23.66	24.12	22.06	22.91	22.52	23.35	23.82
	12H	22.51	23.28	22.99	23.76	24.22	22.22	22.98	22.70	23.46	23.93
8H	4H	21.84	22.70	22.30	23.14	23.60	21.55	22.40	22.01	22.85	23.31
	6H	22.56	23.27	23.06	23.76	24.24	22.29	23.00	22.79	23.49	23.97
	8H	22.84	23.47	23.35	23.98	24.46	22.58	23.22	23.09	23.72	24.21
	12H	23.06	23.62	23.57	24.12	24.68	22.81	23.38	23.32	23.87	24.43
12H	4H	21.87	22.64	22.35	23.11	23.58	21.59	22.35	22.07	22.83	23.30
	6H	22.61	23.25	23.12	23.76	24.24	22.35	22.99	22.86	23.50	23.98
	8H	22.94	23.51	23.45	24.00	24.56	22.70	23.26	23.21	23.75	24.31