

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: P243578

Luminaire Tested: S124RDRP-H795D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243578
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-H795D930-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

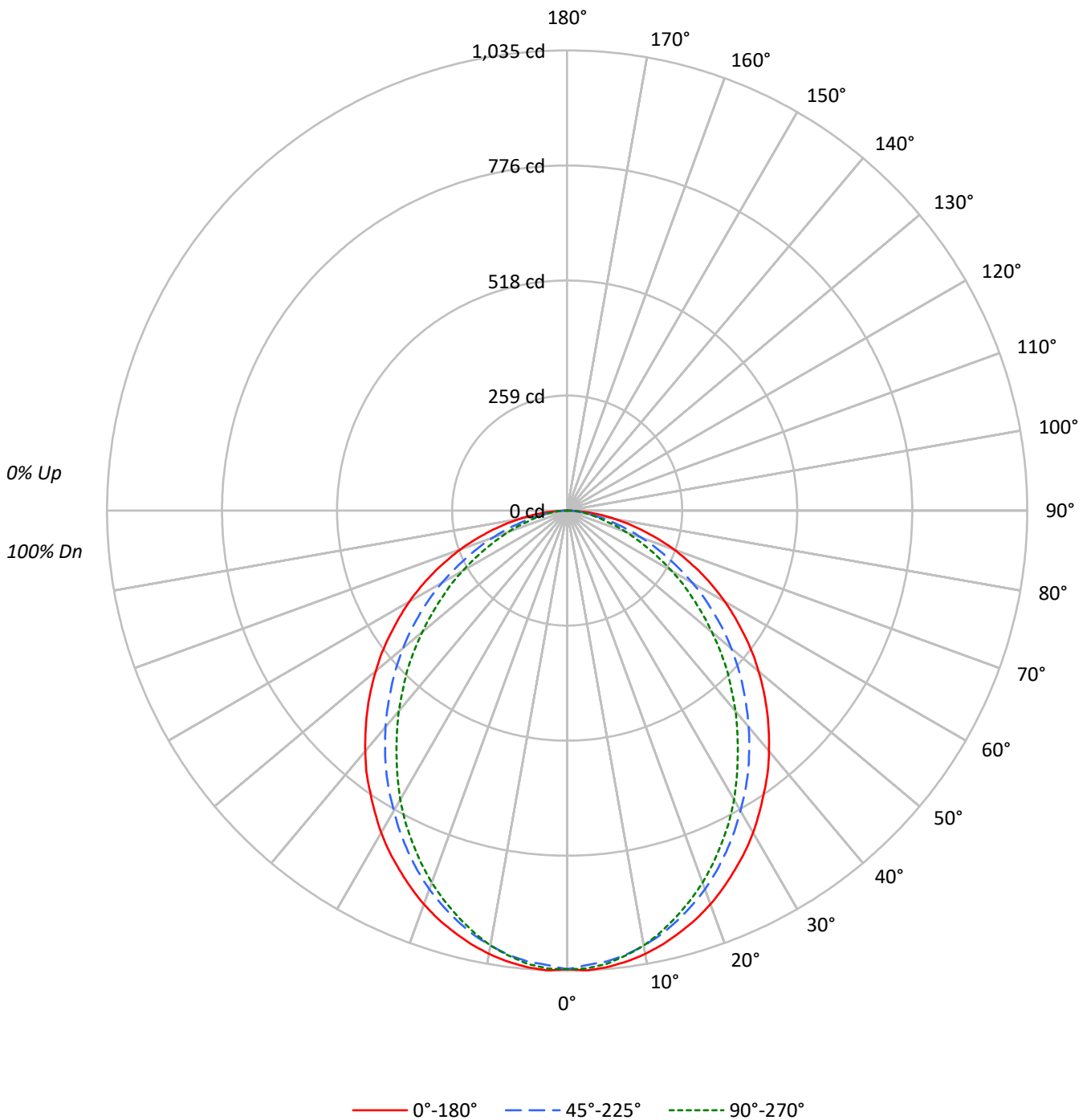
Lumens per Lamp: N/A
Luminaire Lumens: 2432.3 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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	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°	9169	9169	9169
5°	9197	9082	9129
10°	9138	8966	8966
15°	9037	8791	8707
20°	8915	8576	8425
25°	8751	8302	8078
30°	8587	8001	7704
35°	8384	7707	7261
40°	8197	7375	6837
45°	7990	7023	6392
50°	7769	6664	5874
55°	7527	6253	5356
60°	7294	5778	4818
65°	6981	5220	4211
70°	6648	4611	3659
75°	6144	3843	2981
80°	5610	3000	2728
85°	4967	2876	2713

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7990 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.0	4.0
10°-20°	270.9	11.1
20°-30°	392.8	16.2
30°-40°	447.7	18.4
40°-50°	435.6	17.9
50°-60°	366.0	15.0
60°-70°	255.0	10.5
70°-80°	131.7	5.4
80°-90°	35.6	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°	760.7	31.3
0°-40°	1208.5	49.7
0°-60°	2010.1	82.6
0°-90°	2432.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2432.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1032	1032	1032	1032	1032	
5°	1031	1028	1018	1025	1023	98
15°	982	974	955	954	946	277
25°	892	875	846	834	824	411
35°	773	749	710	684	669	484
45°	636	605	559	523	508	490
55°	486	454	404	362	346	435
65°	332	300	248	212	200	329
75°	179	152	112	94	87	191
85°	49	31	28	27	27	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1031.5	1031.5	1031.5	1031.5	1031.5
2.5°	1035.3	1032.2	1023.1	1031.5	1030.7
5°	1030.7	1027.7	1017.8	1025.4	1023.1
7.5°	1023.1	1019.3	1007.9	1013.2	1009.4
10°	1012.4	1008.6	993.4	997.2	993.4
12.5°	998.7	993.4	976.7	977.4	971.3
15°	982.0	974.4	955.3	953.8	946.2
17.5°	963.7	953.8	931.7	927.9	919.6
20°	942.4	930.2	906.6	898.2	890.6
22.5°	918.0	903.6	877.7	867.8	857.9
25°	892.0	875.4	846.5	834.3	823.6
27.5°	865.5	845.7	814.5	799.3	788.6
30°	836.6	813.8	779.5	762.0	750.6
32.5°	804.6	781.8	746.0	724.7	710.2
35°	772.6	749.0	710.2	683.6	669.1
37.5°	741.4	714.8	672.9	645.5	628.8
40°	706.4	678.3	635.6	604.4	589.2
42.5°	671.4	642.5	596.8	564.1	547.3
45°	635.6	605.2	558.7	523.0	508.5
47.5°	599.1	568.6	520.7	483.4	466.6
50°	561.8	531.3	481.9	440.8	424.8
52.5°	525.2	493.3	443.8	401.9	385.2
55°	485.7	454.5	403.5	362.3	345.6
57.5°	447.6	414.9	365.4	323.5	309.8
60°	410.3	377.6	325.0	284.7	271.0
62.5°	370.7	338.0	286.2	247.4	235.2
65°	331.9	299.9	248.2	212.4	200.2
67.5°	292.3	263.4	213.1	178.9	169.0
70°	255.8	223.0	177.4	147.7	140.8
72.5°	217.0	188.0	143.9	119.5	114.2
75°	178.9	151.5	111.9	93.6	86.8
77.5°	143.9	117.2	84.5	69.3	69.3
80°	109.6	86.0	58.6	54.8	53.3
82.5°	77.6	55.6	43.4	40.3	39.6
85°	48.7	31.2	28.2	26.6	26.6
87.5°	23.6	14.5	14.5	13.7	13.7
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	19.15	20.73	19.51	21.04	21.35	17.25	18.83	17.62	19.14	19.46
	3H	20.97	22.38	21.34	22.71	23.07	18.52	19.93	18.89	20.26	20.62
	4H	21.65	22.98	22.05	23.33	23.71	18.91	20.24	19.31	20.59	20.97
	6H	22.16	23.40	22.57	23.76	24.15	19.19	20.42	19.60	20.79	21.18
	8H	22.33	23.51	22.76	23.90	24.30	19.29	20.47	19.72	20.86	21.26
	12H	22.45	23.58	22.88	23.96	24.39	19.37	20.50	19.80	20.88	21.31
4H	2H	19.50	20.84	19.90	21.18	21.56	17.96	19.29	18.35	19.64	20.01
	3H	21.52	22.63	21.93	23.03	23.43	19.41	20.52	19.82	20.92	21.32
	4H	22.33	23.33	22.76	23.75	24.18	19.88	20.89	20.32	21.30	21.74
	6H	22.97	23.85	23.43	24.29	24.74	20.25	21.12	20.71	21.57	22.02
	8H	23.19	24.01	23.65	24.45	24.92	20.39	21.20	20.85	21.65	22.11
	12H	23.35	24.09	23.84	24.56	25.03	20.50	21.24	20.99	21.71	22.18
8H	4H	22.44	23.25	22.90	23.70	24.16	20.22	21.03	20.68	21.48	21.94
	6H	23.16	23.84	23.66	24.33	24.80	20.67	21.34	21.16	21.83	22.31
	8H	23.43	24.04	23.95	24.55	25.04	20.86	21.47	21.37	21.98	22.46
	12H	23.66	24.20	24.17	24.69	25.25	21.05	21.58	21.55	22.07	22.64
12H	4H	22.43	23.16	22.91	23.64	24.11	20.26	20.99	20.74	21.47	21.94
	6H	23.15	23.76	23.67	24.27	24.76	20.73	21.34	21.24	21.85	22.33
	8H	23.47	24.01	23.98	24.50	25.06	20.98	21.51	21.49	22.01	22.57