

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: P243583

Luminaire Tested: S124RDRP-H795D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243583
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-H795D935-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

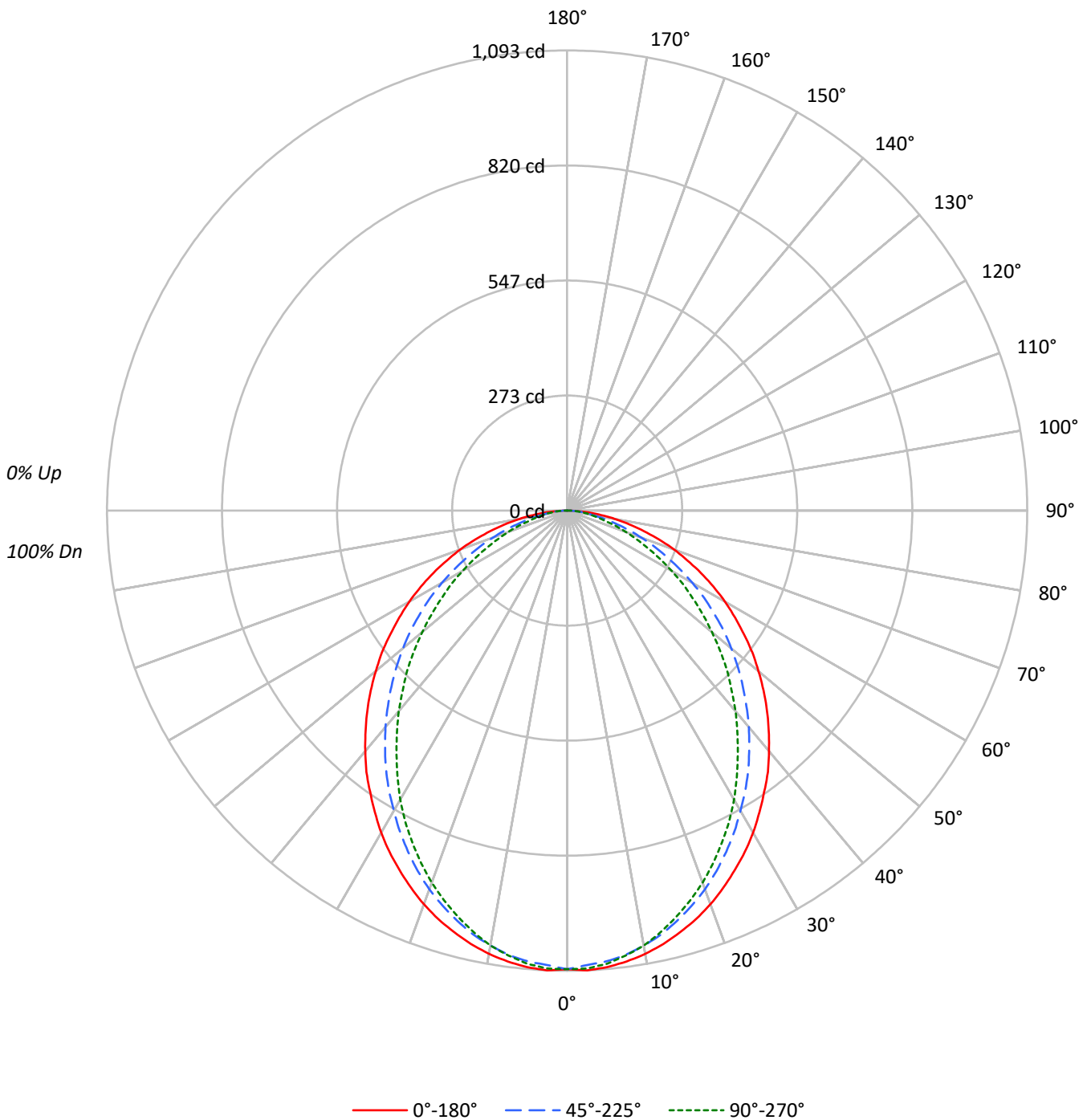
Lumens per Lamp: N/A
Luminaire Lumens: 2568.6 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (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°	9683	9683	9683
5°	9713	9590	9640
10°	9651	9469	9469
15°	9543	9284	9195
20°	9414	9056	8897
25°	9241	8767	8531
30°	9068	8449	8135
35°	8855	8139	7668
40°	8656	7790	7220
45°	8439	7418	6751
50°	8205	7037	6204
55°	7949	6603	5657
60°	7703	6103	5088
65°	7372	5513	4446
70°	7020	4868	3865
75°	6488	4059	3146
80°	5928	3169	2882
85°	5242	3029	2866

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8439 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.4	4.0
10°-20°	286.1	11.1
20°-30°	414.9	16.2
30°-40°	472.8	18.4
40°-50°	460.1	17.9
50°-60°	386.5	15.0
60°-70°	269.2	10.5
70°-80°	139.0	5.4
80°-90°	37.6	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°	803.4	31.3
0°-40°	1276.2	49.7
0°-60°	2122.8	82.6
0°-90°	2568.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2568.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1089	1089	1089	1089	1089	
5°	1088	1085	1075	1083	1080	103
15°	1037	1029	1009	1007	999	292
25°	942	924	894	881	870	434
35°	816	791	750	722	707	511
45°	671	639	590	552	537	518
55°	513	480	426	383	365	459
65°	350	317	262	224	211	347
75°	189	160	118	99	92	201
85°	51	33	30	28	28	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1089.3	1089.3	1089.3	1089.3	1089.3
2.5°	1093.3	1090.1	1080.4	1089.3	1088.5
5°	1088.5	1085.3	1074.8	1082.9	1080.4
7.5°	1080.4	1076.4	1064.4	1070.0	1066.0
10°	1069.2	1065.2	1049.1	1053.1	1049.1
12.5°	1054.7	1049.1	1031.4	1032.2	1025.8
15°	1037.0	1029.0	1008.9	1007.3	999.2
17.5°	1017.7	1007.3	984.0	980.0	971.1
20°	995.2	982.4	957.4	948.6	940.6
22.5°	969.5	954.2	926.9	916.4	906.0
25°	942.2	924.5	893.9	881.1	869.8
27.5°	914.0	893.1	860.2	844.1	832.8
30°	883.5	859.4	823.2	804.7	792.6
32.5°	849.7	825.6	787.8	765.3	750.0
35°	816.0	791.0	750.0	721.9	706.6
37.5°	783.0	754.9	710.6	681.7	664.0
40°	746.0	716.3	671.3	638.3	622.2
42.5°	709.0	678.5	630.3	595.7	578.0
45°	671.3	639.1	590.1	552.3	537.0
47.5°	632.7	600.5	549.9	510.5	492.8
50°	593.3	561.1	508.9	465.5	448.6
52.5°	554.7	520.9	468.7	424.5	406.8
55°	512.9	479.9	426.1	382.7	365.0
57.5°	472.7	438.1	385.9	341.7	327.2
60°	433.3	398.7	343.3	300.7	286.2
62.5°	391.5	356.9	302.3	261.3	248.4
65°	350.5	316.7	262.1	224.3	211.4
67.5°	308.7	278.1	225.1	188.9	178.5
70°	270.1	235.5	187.3	156.0	148.7
72.5°	229.1	198.6	151.9	126.2	120.6
75°	188.9	160.0	118.2	98.9	91.6
77.5°	151.9	123.8	89.2	73.2	73.2
80°	115.8	90.8	61.9	57.9	56.3
82.5°	82.0	58.7	45.8	42.6	41.8
85°	51.4	33.0	29.7	28.1	28.1
87.5°	24.9	15.3	15.3	14.5	14.5
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	19.34	20.91	19.70	21.23	21.54	17.44	19.02	17.81	19.33	19.65
	3H	21.15	22.57	21.53	22.90	23.26	18.71	20.12	19.08	20.45	20.81
	4H	21.84	23.17	22.24	23.52	23.90	19.10	20.43	19.50	20.78	21.16
	6H	22.35	23.59	22.76	23.95	24.34	19.38	20.61	19.79	20.98	21.37
	8H	22.52	23.70	22.95	24.09	24.49	19.48	20.66	19.91	21.05	21.45
	12H	22.64	23.77	23.07	24.15	24.58	19.56	20.69	19.99	21.07	21.50
4H	2H	19.69	21.02	20.09	21.37	21.75	18.15	19.48	18.54	19.83	20.20
	3H	21.71	22.82	22.12	23.22	23.62	19.60	20.71	20.01	21.11	21.51
	4H	22.52	23.52	22.95	23.94	24.37	20.07	21.08	20.51	21.49	21.93
	6H	23.16	24.03	23.62	24.48	24.93	20.44	21.31	20.90	21.76	22.21
	8H	23.38	24.19	23.84	24.64	25.10	20.58	21.39	21.04	21.84	22.30
	12H	23.54	24.28	24.02	24.75	25.22	20.69	21.43	21.18	21.90	22.37
8H	4H	22.63	23.44	23.09	23.89	24.35	20.41	21.22	20.87	21.67	22.13
	6H	23.35	24.03	23.85	24.52	24.99	20.86	21.53	21.35	22.02	22.50
	8H	23.62	24.23	24.13	24.74	25.23	21.05	21.66	21.56	22.17	22.65
	12H	23.85	24.39	24.36	24.88	25.44	21.24	21.77	21.74	22.26	22.83
12H	4H	22.62	23.35	23.10	23.83	24.30	20.45	21.18	20.93	21.66	22.13
	6H	23.34	23.95	23.85	24.46	24.95	20.92	21.53	21.43	22.04	22.52
	8H	23.66	24.20	24.17	24.69	25.25	21.17	21.70	21.68	22.20	22.76