

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: G3-1802-639-84

Luminaire Tested: S124DRP-H795D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: G3-1802-639-84
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H795D835-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

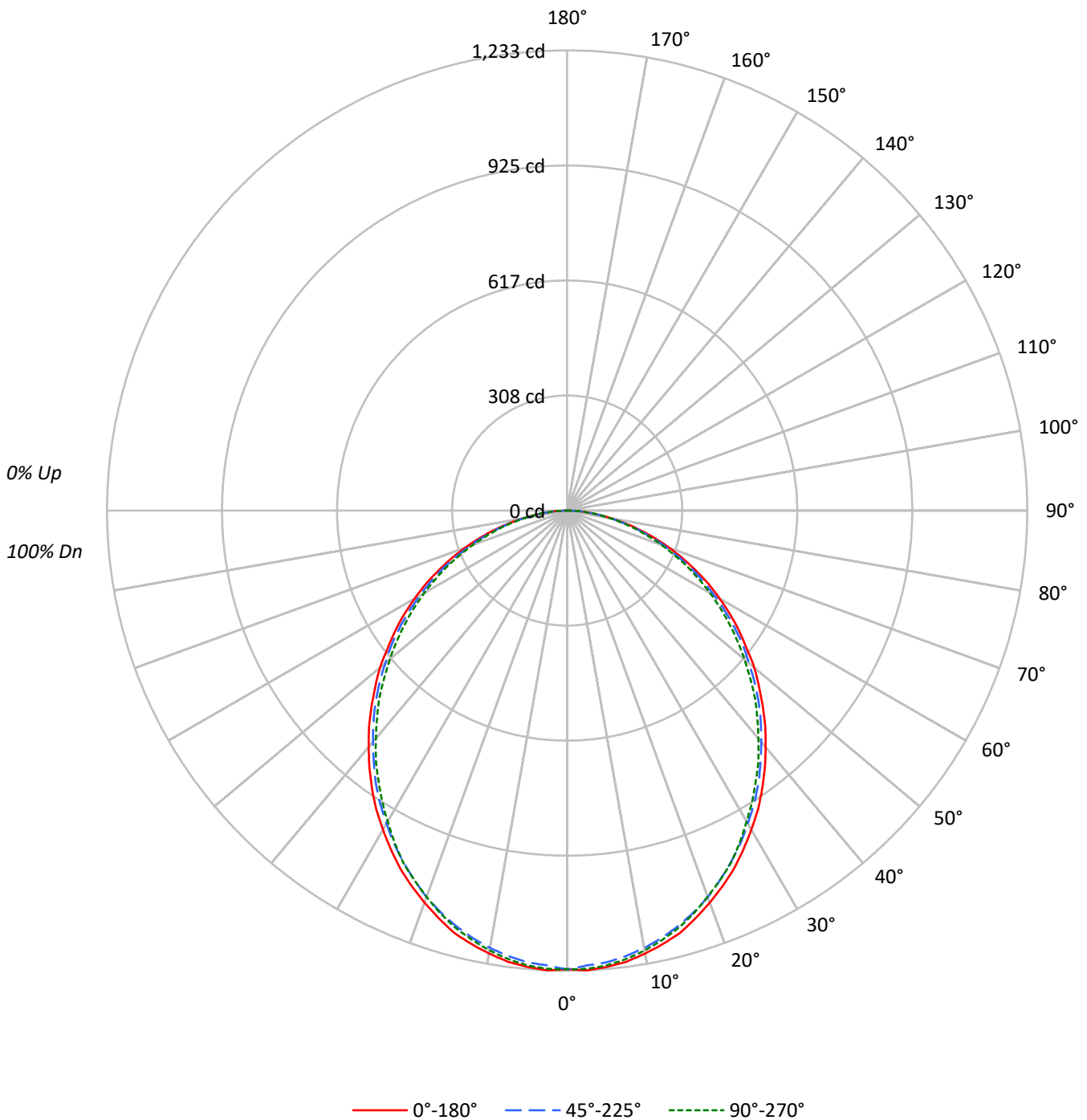
Lumens per Lamp: N/A
Luminaire Lumens: 3163.9 lumens
Efficiency: N/A
Efficacy: 134.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10924	10924	10924
5°	10948	10841	10913
10°	10876	10741	10804
15°	10776	10601	10647
20°	10576	10424	10415
25°	10377	10190	10200
30°	10131	9936	9874
35°	9886	9690	9571
40°	9596	9387	9248
45°	9315	9126	8950
50°	9058	8795	8574
55°	8725	8493	8229
60°	8391	8107	7858
65°	7993	7719	7467
70°	7563	7225	6991
75°	6972	6697	6491
80°	6143	6040	5887
85°	5405	5405	5303

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9315 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.9	3.7
10°-20°	326.7	10.3
20°-30°	481.1	15.2
30°-40°	559.7	17.7
40°-50°	560.0	17.7
50°-60°	489.8	15.5
60°-70°	363.7	11.5
70°-80°	207.2	6.6
80°-90°	59.7	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°	923.7	29.2
0°-40°	1483.4	46.9
0°-60°	2533.2	80.1
0°-90°	3163.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3163.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1229	1229	1229	1229	1229	
5°	1227	1225	1215	1224	1223	116
15°	1171	1165	1152	1159	1157	329
25°	1058	1053	1039	1042	1040	487
35°	911	903	893	885	882	570
45°	741	738	726	715	712	572
55°	563	559	548	536	531	503
65°	380	377	367	359	355	377
75°	203	199	195	191	189	215
85°	53	52	53	51	52	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1229	1229	1229	1229	1229
2.5°	1233	1230	1220	1230	1229
5°	1227	1225	1215	1224	1223
7.5°	1219	1215	1204	1213	1212
10°	1205	1202	1190	1199	1197
12.5°	1189	1186	1173	1180	1178
15°	1171	1165	1152	1159	1157
17.5°	1145	1141	1128	1134	1131
20°	1118	1113	1102	1103	1101
22.5°	1089	1084	1071	1075	1071
25°	1058	1053	1039	1042	1040
27.5°	1023	1018	1005	1006	1002
30°	987	981	968	967	962
32.5°	951	945	932	928	923
35°	911	903	893	885	882
37.5°	870	866	851	846	842
40°	827	823	809	802	797
42.5°	786	781	768	758	754
45°	741	738	726	715	712
47.5°	697	696	681	670	665
50°	655	649	636	626	620
52.5°	606	605	594	581	576
55°	563	559	548	536	531
57.5°	518	516	502	492	487
60°	472	468	456	447	442
62.5°	428	423	412	403	398
65°	380	377	367	359	355
67.5°	335	331	321	314	310
70°	291	285	278	272	269
72.5°	247	242	236	232	228
75°	203	199	195	191	189
77.5°	161	157	155	154	152
80°	120	118	118	117	115
82.5°	85	83	83	83	82
85°	53	52	53	51	52
87.5°	25	25	26	25	26
90°	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	19.61	21.22	19.97	21.53	21.85	19.26	20.87	19.62	21.19	21.50
	3H	21.36	22.82	21.73	23.14	23.50	20.97	22.43	21.35	22.76	23.12
	4H	22.01	23.39	22.41	23.74	24.11	21.62	22.99	22.02	23.34	23.72
	6H	22.49	23.76	22.90	24.13	24.52	22.11	23.38	22.52	23.74	24.14
	8H	22.64	23.86	23.07	24.25	24.65	22.27	23.48	22.69	23.87	24.27
	12H	22.75	23.91	23.18	24.29	24.72	22.38	23.55	22.81	23.93	24.36
4H	2H	20.18	21.55	20.58	21.90	22.28	19.90	21.28	20.30	21.62	22.00
	3H	22.15	23.30	22.56	23.70	24.10	21.83	22.99	22.24	23.38	23.78
	4H	22.94	23.98	23.37	24.39	24.83	22.61	23.65	23.04	24.06	24.50
	6H	23.54	24.45	23.99	24.89	25.35	23.23	24.14	23.68	24.58	25.03
	8H	23.74	24.59	24.20	25.03	25.50	23.44	24.29	23.90	24.73	25.19
	12H	23.89	24.65	24.37	25.13	25.60	23.59	24.36	24.07	24.83	25.30
8H	4H	23.22	24.07	23.68	24.51	24.98	22.93	23.78	23.39	24.22	24.69
	6H	23.94	24.65	24.43	25.14	25.61	23.67	24.38	24.17	24.87	25.34
	8H	24.21	24.85	24.72	25.35	25.84	23.96	24.59	24.47	25.10	25.58
	12H	24.44	25.00	24.94	25.49	26.05	24.19	24.75	24.70	25.24	25.80
12H	4H	23.25	24.01	23.73	24.49	24.96	22.96	23.73	23.44	24.21	24.67
	6H	23.99	24.63	24.50	25.13	25.62	23.73	24.37	24.24	24.87	25.36
	8H	24.32	24.88	24.83	25.37	25.93	24.08	24.64	24.58	25.13	25.69