

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: G3-1802-639-49

Luminaire Tested: S123DRP-H775D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: G3-1802-639-49
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-H775D835-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

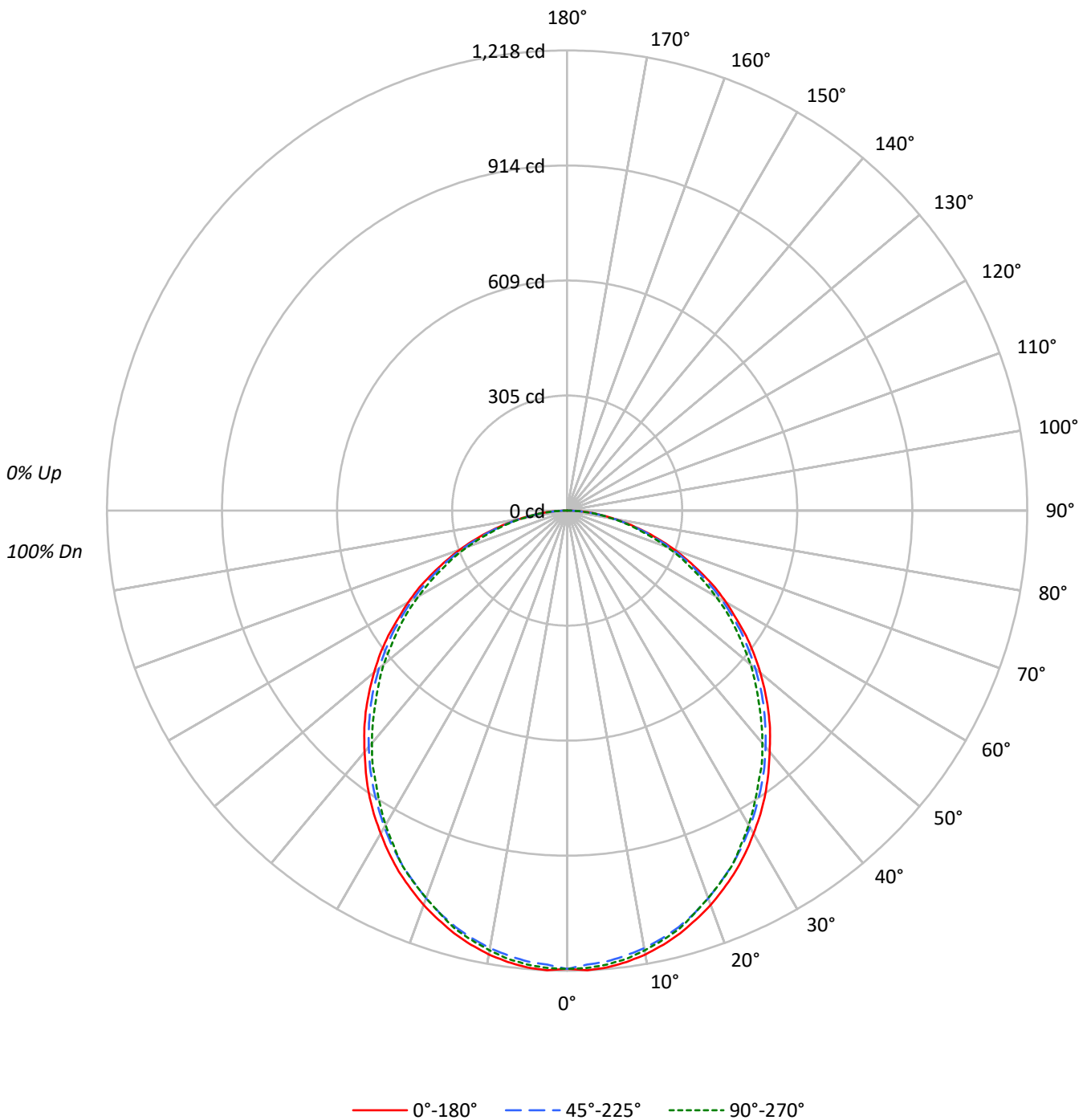
Lumens per Lamp: N/A
Luminaire Lumens: 3208.9 lumens
Efficiency: N/A
Efficacy: 125.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 25.6
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	94	97	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59
4	83	71	62	55	80	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14547	14547	14547
5°	14614	14422	14518
10°	14527	14320	14394
15°	14377	14166	14228
20°	14178	13936	13923
25°	13947	13682	13695
30°	13667	13404	13307
35°	13395	13103	12912
40°	13056	12790	12586
45°	12788	12482	12160
50°	12444	12127	11828
55°	12085	11771	11374
60°	11656	11345	10889
65°	11152	10811	10357
70°	10589	10238	9818
75°	9823	9545	9035
80°	8840	8633	8356
85°	8256	7843	7568

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12788 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.4	3.6
10°-20°	323.6	10.1
20°-30°	479.1	14.9
30°-40°	561.9	17.5
40°-50°	568.1	17.7
50°-60°	502.4	15.7
60°-70°	377.3	11.8
70°-80°	217.5	6.8
80°-90°	64.5	2.0
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°	917.2	28.6
0°-40°	1479.1	46.1
0°-60°	2549.6	79.5
0°-90°	3208.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3208.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1213	1213	1213	1213	1213	
5°	1214	1209	1198	1208	1206	115
15°	1158	1152	1141	1149	1146	326
25°	1054	1046	1034	1039	1035	485
35°	915	907	895	892	882	572
45°	754	748	736	726	717	581
55°	578	574	563	552	544	516
65°	393	390	381	371	365	389
75°	212	210	206	200	195	225
85°	60	59	57	56	55	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1213	1213	1213	1213	1213
2.5°	1218	1214	1203	1214	1212
5°	1214	1209	1198	1208	1206
7.5°	1205	1200	1188	1199	1197
10°	1193	1188	1176	1185	1182
12.5°	1177	1172	1160	1167	1165
15°	1158	1152	1141	1149	1146
17.5°	1135	1130	1118	1128	1119
20°	1111	1106	1092	1101	1091
22.5°	1083	1077	1063	1069	1064
25°	1054	1046	1034	1039	1035
27.5°	1022	1014	1002	1004	997
30°	987	980	968	970	961
32.5°	952	946	931	931	922
35°	915	907	895	892	882
37.5°	875	868	857	852	846
40°	834	830	817	811	804
42.5°	795	788	777	769	761
45°	754	748	736	726	717
47.5°	711	706	694	683	676
50°	667	663	650	638	634
52.5°	624	619	606	595	587
55°	578	574	563	552	544
57.5°	529	529	517	507	501
60°	486	481	473	462	454
62.5°	441	438	427	416	410
65°	393	390	381	371	365
67.5°	346	345	337	329	325
70°	302	300	292	284	280
72.5°	257	255	248	241	236
75°	212	210	206	200	195
77.5°	168	168	163	161	159
80°	128	127	125	123	121
82.5°	92	91	89	88	88
85°	60	59	57	56	55
87.5°	31	29	28	26	25
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	20.75	22.38	21.12	22.69	23.01	20.44	22.07	20.81	22.38	22.70
	3H	22.55	24.02	22.93	24.35	24.71	22.20	23.67	22.57	23.99	24.35
	4H	23.23	24.61	23.63	24.96	25.34	22.85	24.23	23.25	24.58	24.95
	6H	23.73	25.01	24.14	25.37	25.76	23.35	24.63	23.76	25.00	25.39
	8H	23.89	25.12	24.32	25.51	25.91	23.52	24.74	23.94	25.13	25.53
	12H	24.02	25.19	24.45	25.57	26.00	23.64	24.81	24.07	25.20	25.62
4H	2H	21.34	22.73	21.74	23.08	23.45	21.10	22.48	21.50	22.83	23.21
	3H	23.37	24.53	23.78	24.93	25.33	23.07	24.23	23.48	24.63	25.03
	4H	24.18	25.23	24.61	25.64	26.08	23.85	24.90	24.28	25.32	25.75
	6H	24.81	25.73	25.26	26.17	26.62	24.48	25.40	24.94	25.84	26.30
	8H	25.03	25.89	25.49	26.33	26.79	24.70	25.56	25.16	26.00	26.47
	12H	25.20	25.97	25.68	26.45	26.92	24.87	25.64	25.35	26.12	26.59
8H	4H	24.47	25.33	24.93	25.78	26.24	24.19	25.05	24.65	25.49	25.95
	6H	25.23	25.94	25.72	26.43	26.91	24.94	25.66	25.43	26.15	26.62
	8H	25.52	26.17	26.03	26.67	27.16	25.24	25.88	25.75	26.39	26.87
	12H	25.78	26.35	26.29	26.84	27.40	25.49	26.06	26.00	26.55	27.11
12H	4H	24.50	25.28	24.98	25.75	26.22	24.22	25.00	24.70	25.47	25.94
	6H	25.28	25.93	25.79	26.43	26.92	25.01	25.65	25.52	26.16	26.64
	8H	25.64	26.21	26.15	26.70	27.26	25.37	25.93	25.87	26.43	26.99